

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1849.—Vol. XLI.

LONDON, SATURDAY, JANUARY 28; 1871.

(WITH SUPPLEMENT) {PRICE ..... FIVEPENCE.  
(PER ANNUM, BY POST, £1 4s)

**MR. JAMES CROFTS, STOCK AND SHAREBROKER,**  
No. 1, FINCH LANE, CORNHILL.  
(ESTABLISHED 1842.)

The continued rise in the price of tin is creating an immense demand for shares in good tin mines. At the ROCHE CONSOLS TIN MINE large returns of tin can be made at a cost of about £30 per ton. Black tin is now over £80 per ton. There are five lodes opened upon in the sett; one that has been driven upon is worth 30 lbs. of tin to the ton of the lode. The supply of tinstuff is practically inexhaustible, and the agent states that profits will be returned to the shareholders directly the machinery, which is now in course of erection, is completed. Mr. CROFTS SPECIALLY RECOMMENDS these shares for a great advance in price. The mine is situated at the head of the celebrated Goss Moors, from which millions worth of tin have been raised.

Bankers: Metropolitan Bank.

**MR. W. H. BUMPUS, STOCK AND SHAREDEALER,**  
44, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the following SHARES, free of commission:—

15 Ashton, £4½.	15 East Grenville, £3½.	20 Rosewall Hill, £10½.
50 Anglo-Argent, 11s 3d.	10 Eberhardt, £13.	5 Roman Gravel, £10½.
75 Anglo-Brail, 2s. 6d.	50 Frontino, 12s.	10 So. Condurow, £4 16s.
60 Australian Un., 10s 6.	15 Frank Mills, 30s.	30 So. Great Work, 4s 9d.
20 Bradford, £2½.	50 Gen. Brazil, £14 pm.	25 Sweetland Crk., £11 3.
15 Bwih Consols, £2.	15 Great Lacey, £17½.	50 Taquaril, 34s. pm.
25 Bwadrin Con., 27s 6.	30 Gunnislake (Cliffers), 31s. 6d.	15 Tankerville, £13½.
20 Carn Camborne, 30s.	20 Marke Valley, £7½.	30 Van Consols, 30s. 9d.
40 Caegynon, 16s. 3d.	20 New Beldon, 13s. 6d.	20 Wheal Russell, 30s.
50 Calbeck Fells, 10s 9d.	20 New Trelawny, 10s.	25 Wt. Tanker, £2½.
100 Chontales, 11s.	25 Okel Tor, 20s.	40 West Maria, 25s. 6d.
20 Don Pedro, £2½.	30 Pacific, £13½.	20 Wt. Godolphin, 22s 9.
30 Drake Walls, 24s. 6d.	20 Plynlimmon, 41s. 3d.	5 W. Chiverton, £49½.
75 Eclipse, 9s. pm.	25 Pestarena, 12s.	50 Wt. Pant-y-go, 15s 6d.
10 East Caradon, £5½.	25 Prince of Wales, 36s 6.	10 Wheal Uny.
5 East Lovell, £3½.		

W. H. B. transacts business in every description of shares at the best market prices, and free of commission.

Daily Price-List free on application.

Bankers: The Metropolitan Bank (Limited), Cornhill, E.C.

**JOHN RISLEY, (SWORN) STOCK AND SHAREBROKER,**  
48, THREADNEEDLE STREET, LONDON, E.C.  
Bankers: London and Westminster, Lothbury.

**MR. Y. CHRISTIAN, STOCK AND SHAREDEALER,**  
11, ROYAL EXCHANGE, E.C.  
Bankers: Bank of England.

**MR. T. A. MUNDY, STOCK AND SHAREDEALER,**  
38, BISHOPSGATE STREET WITHIN, E.C.  
Bankers: City Bank.

**MR. THOMAS ROSEWARNE, SHAREDEALER,**  
81, OLD BROAD STREET, LONDON, E.C.  
T. R. has BUSINESS in the following SHARES as BUYER or SELLER at the market prices of the day, for cash or account, or end of February:—

Ashton.	East Caradon.	Pen'Alit.
Bedford United.	East Lovell.	Tankerville.
Bedford Consols.	East Grenville.	Taquaril.
Carn Camborne.	Eclipse.	Van.
Calbeck Fells.	East Pool.	Van Consols.
Chontales.	Frank Mills.	West Tankerville.
Chiverton Moor.	Great Vor.	West Chiverton.
Devon Consols.	Marke Valley.	Wheal Seton.
Drake Walls.	Prince of Wales.	

Parties in the country wishing to purchase in any of the above-named mines for time on can do so through me, with the distinct understanding that it is to be strictly private.

Money advanced to any extent upon good marketable mining shares.

Bankers: Bank of England. Office hours Ten to Four.

**ENDEAN AND CO. STOCK AND SHAREDEALERS,**  
BRITISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES,  
85, GRACECHURCH STREET, LONDON, E.C.

We know of no tin mining property in the West of England so safe and bona fide for investment as the TERRAS TIN MINE. These shares should be bought at once. If applied for at once, we can sell any portion of 70 shares at £3 each. It is believed they will go to £20 per share. The company is limited. We advise only limited liability companies, cautioning investors to avoid the Cost-Book System as they would a serpent.

ABERDAUNT is looking for a second throughout, and is bidding fair to be another Van. An important discovery has just taken place; the lode will yield 4 tons of lead per fathom. Investors may take their agents, or go and see for themselves. These shares will have a considerable advance in price, and should be bought for investment.

We especially advise the purchase of EAST LLANGYNOG shares, at £2 10s. each. From the important discoveries already made, and the quantities of ore being brought to surface, containing rocks of solid lead from 1 cwt. to 7 cwt. each, and parcels of ore going into the market within a few weeks of the formation of the company, and knowing the adjoining mine on the same lode has paid over £1,000,000 in profits, we feel assured this mine will be in the Dividend List almost immediately. We strongly advise it to our clients.

Mr. ENDEAN, having just returned from the Welsh mining districts, is in a position to advise whether to buy or sell in either mine now before the public. All negotiable stocks dealt in for cash or account.

ENDEAN AND CO., 85, Gracechurch Street, London, E.C.

**MR. HENRY MANSELL, STOCK AND SHAREDEALER,**  
34, GREAT WINCHESTER STREET, LONDON, E.C., has the following SHARES FOR SALE, for cash or account, free of commission:—

20 Taquaril, £1 13 9 pm.	20 So. Condurow, £5.	50 Aberdaunt.
20 Cofn Consols.	75 West Maria, 27s. 6d.	10 East Lovell, £32½.
25 Wt. Grenville, £4½.	60 Terras Tin.	50 Llanarmon.
50 New Rosario, 25s.	200 Wt. Rhosw. Adol, 14s.	60 Excelsior.
20 Tankerville, £13½.	150 Hankwood Consol, 4s.	25 Prince of Wales.
100 North Trekerby.	20 North Crofty, £2 6s 3.	70 Wheal Crebor.
25 Drake Walls.	50 Holmbush and Kelly.	110 Bryn Royallton, 11s 6.
150 Perran Consols, 13s.	Bray, 8s.	155 New Grassington, 15s.
10 New Beldon, 14s. 6d.	25 West Tankerville.	50 East Llangynog, £24½.
15 Van Consols, 32s. 6d.	200 Gwydyr Park, 10s. 6d.	25 Great Royallton, 25s.
	15 Carn Camborne.	

TERRAS TIN MINE.—Shares should be bought at once in this mine for a great rise in price. Mr. H. M. advises every intending purchaser to send an independent agent and judge by the Inspectors' reports.

East Llangynog, Taquaril, Tankerville, South Condurow, Prince of Wales, West Jewell, and Van Consols are also well worth buying for an immediate advance from present quotations.

A Daily List of Closing Prices sent to clients free on application.

Bankers: London Joint-Stock Bank.

**JOHN LEAN, M.E., AND CO. STOCK AND SHARE DEALERS,**  
5, AUSTINRIARS, OLD BROAD STREET, LONDON, E.C.  
J. L. late manager of Silver and Copper Mines, Chili, and more recently from Cornwall.

Gold, Silver, and other Metallic Mines examined, surveyed, and reported on at home or abroad.

Stocks or shares negotiated in every kind of available security.

We advise the immediate purchase of the TERRAS TIN shares, and can offer 75 or any less portion, if applied for at once, at £3 each. This extraordinary mine has just sold an additional parcel of tin, 5 tons, at £76 15s. per ton. Terras must soon go in the Dividend List.

Also the fully-paid ABERDAUNT shares. These will have a considerable rise. See the agent's report in this Journal.

We strongly advise the purchase of shares in the EAST LLANGYNOG at £2 10s. each. It is believed this mine will give a dividend from the sale of lead within four months from the registration of the company.

J. L., having recently returned from Wales, is in a position to give clients the best information and advice touching those mines of interest.

Our Guide to Investors will be ready for issue on Wednesday next. Copies forwarded on application, free to clients.

**MR. GEORGE BUDGE, STOCK AND SHAREDEALER,**  
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 21 years), is a SELLER at net prices of:—

2 Devon Great Consol., 50 Roman Gravel, 40 Nangiles, 100 Prince of Wales, 10 Great Wheal Vor, 55 Trevaick, 10 Wheal Kitty (St. Agnes), 30 Bwih Consols, 3 Providence, 10 Polbreen, 60 Perran Virgin, 30 South Merilyn, 60 Old Treburgett, 70 Carn Camborne, 50 Pen'Alit, 40 East Grenville, 120 West Drake Walls, 10 East Caradon, 25 West Jewell, 100 West Tremayne, 100 Taquaril, 150 Eclipse, 220 General Brazilian, and 100 Anglo-Brazilian.

Mr. BUDGE advises the purchase of Bwadrin Consols shares. If investors compare this mine with others selling at higher prices, they cannot fail to recognize in it a bona fide undertaking. Sales of ore continue regular.

**MR. PETER WATSON, STOCK AND SHAREDEALER,**  
79, OLD BROAD STREET, LONDON, E.C.  
Bankers: The Alliance Bank, and Union Bank of London.

**THE SHROPSHIRE LEAD MINING DISTRICT.**  
PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," &c., of Friday, Jan. 27, No. 619, contains the THIRD PORTION of a REVIEW of the SHROPSHIRE LEAD MINING DISTRICT, to be continued in future numbers. It also contains information on the Leading Mines of Cornwall and Shropshire.

**THE ROMAN GRAVELS LEAD MINING COMPANY**  
(NEAR THE SNAILBEACH AND TANKERVILLE LEAD MINES, SHROPSHIRE.)

Particulars of this Important and Profitable Lead Mine are to be found in PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," &c., of Friday, Jan. 27, No. 619. Further particulars will be given in future Circulars.

**FOREIGN GOLD MINES.**  
SHAREHOLDERS IN FOREIGN GOLD MINES should read PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST," of Friday, Jan. 27, No. 619. Price 6d. each, forwarded on application.

**MR. EDWARD COOKE,**  
STOCK AND MINING SHAREDEALER, 76, OLD BROAD STREET, LONDON, E.C.  
Bankers: Alliance Bank.

**MR. W. H. CUELL,**  
No. 42, CORNHILL, LONDON, E.C.  
Daily price-list on application.

**MR. W. TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,** transacts BUSINESS in all descriptions of SHARES on the most favourable terms.

W. T. continues to recommend the purchase of TAQUARIL shares. The last account from Brazil represents the stamps being ready to commence work the beginning of December, and no doubt in a very short time large remittances of gold will come forward. Everything connected with the mine is progressing favourably, and the shareholders may confidently look forward to large dividends during the current year.

W. T. is prepared to give sound advice to purchasers being personally acquainted with the property in all its details.

W. T. also recommends for investment the shares of the Van, Carn Brea, and Eclipse.

**MR. E. J. BARTLETT, STOCK AND SHAREDEALER,**  
No. 30, GREAT ST. HELEN'S, LONDON, E.C., transacts business at net prices in every description of security.

SPECIAL BUSINESS in Frank Mills, Great Western, Calbeck Fells, West Godolphin, Wheal Agar, West Tankerville, and East Seton shares.

\* Seventh Edition of "How to Invest," &c. Post free for seven stamps.

**MR. C. A. POWELL, BRITISH AND FOREIGN STOCK AND SHAREDEALER,** No. 1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.

Business transacted in every description of negotiable security at current market prices, net.

SPECIAL BUSINESS in Prince of Wales, Frontino, Sweetland Creek, South Condurow, Van, Taquaril, Eberhardt, and New Great Consol.

GREAT ROYALTON.—The advertiser is prepared to treat on favourable terms with parties having business in these shares.

CWM VROX.—Mr. C. A. POWELL is prepared to furnish particulars of, and reports on, this company upon application. See report in Mining Journal of Jan. 21, of the meeting held at Shrewsbury on Jan. 17.

Price List on application. References exchanged.

Bankers: City Bank, Finch-lane, E.C.

**SILK AND CO. STOCK AND SHARE BROKERS,**  
CHIEF OFFICES: 32, REGENT STREET, W.  
CITY OFFICES: 16, MARK LANE, E.C.

We are prepared to negotiate the purchase or sale of stocks and shares at the closest market prices, for cash only.

CWMBOLE, MORBEN, CROWN.—Shares in the above slate quarries are recommended as safe and permanent investments.

FRANK LIMMER, Secretary.

Twenty-six Years' Experience.

**MR. F. W. MANSELL, STOCK AND SHAREDEALER,**  
1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.  
Daily List of closing prices in British and Foreign mines published every evening, and forwarded to correspondents (free of charge).

References exchanged. Bankers: London Joint-Stock Bank.

JANUARY, 1871.

**PROFITABLE INVESTMENT OF CAPITAL IN BRITISH AND FOREIGN MINES.**

By F. W. MANSELL, 1, Pinner's Court, Old Broad Street, London.

To be had on application. Price 1s.

**MR. JAMES STOCKER, STOCK AND SHAREDEALER,**  
2, CROWN COURT, THREADNEEDLE STREET, AND MINING EXCHANGE, transacts Business in all kinds of Stocks and Shares.

Bankers: London and Westminster, Lothbury.

J. S. has BUSINESS in the FOLLOWING SHARES for cash or account:—

Chontales.	Eclipse.	Don Pedro.
Taquaril.	Sweetland Creek.	New Quebrada.
Great Vor.	Eberhardt.	Cook's Kitehen.
Roman Gravel.	East Lovell.	West Chiverton.

**MR. G. D. SANDY, STOCK AND SHAREDEALER,**  
48, THREADNEEDLE STREET, LONDON, E.C.  
Business transacted in every description of Stocks and Shares for cash or account.

Recommended for immediate purchase—South Condurow, West Jewell, Taquaril (Gold), Carn Camborne, and West Egar Llee, there being no probable risk by an investment in one or all of these mines.

**MR. JOHN R. PIKE** takes the occasion of the commencing year to THANK his NUMEROUS CLIENTS for their SUPPORT and AP-PROBATION during his PROFESSIONAL CAREER of a QUARTER OF A CENTURY, and especially during the last year; and begs, again, TO OFFER HIS SERVICES in every department connected with the PURCHASE and SALE of MINING and GENERAL STOCKS.

Mr. PIKE confidently advises his friends that the present hour offers most favourable opportunities for successful investments in Mining Shares, as he can select properties that will certainly realise from 10 to 15 per cent. immediately, with prospective advance. He can, besides, name Progressive Mines, where an advance of 50 per cent. on prices may be fairly looked for, with a certainty of dividends.

3, Crown-chambers, Crown-court, Threadneedle-street, Jan. 12, 1871.

**THE CITY EXCHANGE MINING AND INVESTMENT OFFICES,** 32, NEW BROAD STREET, LONDON, E.C.

ALFRED FISHER, MANAGER.

The TERRAS TIN MINE shares are in demand at £3 each, and will go higher. Investors will do well to buy at once. We have only 35 that we can offer for sale at £3 each. Apply at once. This mine will soon rank amongst the best dividend-paying mines in the West of England. We are advised of another parcel of tin just sold at £76 15s. per ton, and the largest parcel for any month previously sold, and at the highest price. This augurs well for future dividends. Tin has advanced £5 per ton. This looks well for TERRAS, and from its prosperity mining sets are being applied for all around it.

We advise the immediate purchase of shares in the EAST LLANGYNOG MINING COMPANY (Limited), at £2 10s. each. From the discoveries of ore already made it is believed this mine will commence paying dividends within four months from the formation of the company.

ABERDAUNT.—An important discovery has taken place in this mine; the lode will yield 4 tons of lead per fathom.

Business promptly transacted in every available security.

The following shares should be purchased:—TAQUARIL, ABERDAUNT, GEIVRON, TANKERVILLE, DEVON CONSOLS, NEW ROSARIO, and GREAT VOR shares.

**MR. CHARLES THOMAS,**  
MINING AGENT, AND GENERAL SHAREDEALER,  
3, GREAT ST. HELEN'S, LONDON, E.C.

Second Edition. Now ready, post free, sixpence.  
**INVESTMENTS AND SPECULATIONS**  
FOR 1871.

CHARLES THOMAS, 3, Great St. Helen's, London.

**MR. T. E. W. THOMAS, STOCK AND SHAREDEALER,**  
3, GREAT WINCHESTER STREET BUILDINGS, E.C.  
Business operations in Mining Shares negotiated at close market rates.

Daily Price-List on application.

Parties holding mining shares not having daily quotations, can learn their correct market value on application to Mr. THOMAS.

New edition, 1870, price 6d.  
**SELF HELP TO PATENT LAW;**  
Also, price 1s.

**COLONIAL AND FOREIGN PATENT LAWS.**

By GEORGE DAVIES, C.E.

Published at the Office for Patents, 4, St. Ann's-square, Manchester, by GEORGE DAVIES, C.E. (late John Davies and Son).

Established 1839.

**MR. JOHN MOSS, STOCK AND SHAREDEALER,**  
ST. MICHAEL'S CHAMBERS, 42, CORNHILL, E.C.  
Bankers: City Bank, Finch-lane, E.C.

**MR. WILLIAM SEWARD, STOCK AND MINING SHARE BROKER,** 19, THROGMORTON STREET, LONDON, E.C.  
Every description of shares BOUGHT and SOLD at the best market prices.

**MR. THOMAS SPARGO, STOCK AND SHAREDEALER,**  
224 AND 225, GRESHAM HOUSE,  
OLD BROAD STREET, LONDON, E.C.

**MESSRS. G. LAVINGTON AND A. PENNINGTON,**  
44, THREADNEEDLE STREET, E.C., STOCK AND SHAREDEALERS  
have SPECIAL BUSINESS in the undermentioned:—

Pacific Gold.	Tankerville.	Carn Camborne.
East Lovell.	East Caradon.	Brooklyn.
Sweetland Creek.	Taquaril.	Great Rock.
Marke Valley.	Tinroft.	Eclipse.

TO INVESTORS.—NOW READY.

**LAVINGTON AND PENNINGTON'S "MONTHLY RECORD OF INVESTMENTS,"** containing an exhaustive Review of the British and Foreign Stock and Share Markets, &c., with an enumeration of safe investments, paying from 10 to 20 per cent. Price 6d. per copy, or 5s. annually.

G. LAVINGTON and A. PENNINGTON, 44, Threadneedle-street, London, E.C.

**IMPORTANT TO INVESTORS IN BRITISH AND FOREIGN MINES, RAILWAY STOCKS, and other Securities of all descriptions.**

Dividends at the rate of 5, 10, and 15 per cent.

Consult Mr. JOHN B. REYNOLDS' SPECIAL LIST OF INVESTMENTS.

Sent free by post on application to JOHN B. REYNOLDS, Stock and Share-dealer, 70 and 71, Bishopsgate-street Within, London, E.C.

**MR. THOMAS THOMPSON, JUN., STOCK AND SHAREDEALER AND MINE AGENT,** 5, WHITEHALL, S.W.

Mr. THOMPSON advises the immediate purchase of THORNHILL REEF GOLD shares (Victoria). The issued capital is only £15,000, which amount will come to the shareholders for dividends with some of the more pretentious companies having immense capital. The mine is fully proved, and has large reserves already laid open.

**MESSRS. J. HUME AND CO., 74, OLD BROAD STREET, LONDON, E.C., STOCK AND SHARE BROKERS.**

Publishers of the "Investment Record and Mining Review."

MINES.—East Chiverton, £3½, £1; West Tankerville, £3½, £3½; Taquaril, £1½, £1½ pm.; Eclipse, £3½, £3½ pm.; Great Vor, £5½, £7½; East Lovell, £7½, £8; Fluoroit, £4½, £4½; Eberhardt, £13, £14; South Condurow, £14, £14; Cook's Kitchen, £17, £18; East Pool, £9½, £10½; Kitty (St. Agnes), £2½, £2.

SPECIAL BUSINESS in Taquaril, Eberhardt, and Eclipse.

Sales or purchases effected at closest prices.

Bankers: The London Joint-Stock Bank.

NOTICE OF REMOVAL.

**HOOPER AND CO., STOCK AND SHAREDEALERS,** LIFE, FIRE, AND MARINE INSURANCE AGENTS, have REMOVED their OFFICES to—  
9, UNION COURT, OLD BROAD STREET.

We recommend investment in the ABERDAUNT LEAD MINING COMPANY (Limited), in the Van district, on the Van lode. This mine is now making good returns of ore, and a third parcel of lead is being prepared for market; also in the EAST LLANGYNOG LEAD MINING COMPANY (Limited), the shares in which, as we anticipated, have advanced in price, and should be purchased immediately, as the price is still rising. Investors are advised to purchase quickly into Mexican mines, the richest field now offered for English enterprise. We are always in possession of the earliest and most reliable information. The GUATAMAZIN, advised exclusively by us, has risen in value in six months from £240,000 to £260,000. We are in a position to do even better with another mine.

Confidential information to clients only.

At the rate of One Guinea per annum, we give investors information on legitimate mining properties in the United Kingdom.

Our Circular for January contains mineral statistics of the highest value, as well as a list of approved mining investments. Price 6d., free to clients. Our February issue will be ready early in the month, and will contain, as usual, valuable information for investors.

FOR SALE.—Aberdaunt; 45 Terras, fully paid; 50 East Llangynog, £2 10s.; 20 East Terras, fully paid; 25 New Rosario, fully paid, £1 5s.; 50 Cwm Ricket; 10 El Chico.

WANTED TO PURCHASE.—Wheal Kitty (St. Agnes), Wheal Mary Ann shares, and Anglo-American Telegraph.

HOOPER AND CO., 9, Union-court, Old Broad-street, London.

**BARTLETT AND CHAPMAN, STOCK AND SHARE DEALERS,** 36, CORNHILL, LONDON, E.C.

The INVESTMENT CIRCULAR, published on the first Wednesday in each month. Subscription 5s. a year, including postage; a single copy, 6d.

The HANDY-BOOK FOR INVESTORS, comprising a sketch of the Rise, Progress, and Present Character of every species of Investment, British, Colonial, and Foreign; including an estimate of their comparative safety and profit. Bound in cloth, 10s. 6d.

BRITISH MINES AND MINING, comprising a comparison of Mining with other Investments; a description of the Mining Districts of the United Kingdom, and a detailed account of the Tin, Copper, Lead, and other Mines in Cornwall, Devon, Salop, Wales, and the Isle of Man; with a complete Glossary of Mining Terms. Bound in cloth, 2s. 6d.

MONTHLY LIST OF BRITISH AND COLONIAL INVESTMENTS, showing the rate of interest returned in marketable stocks and shares, for the guidance of investors. 1s., post free.

Cheques to be crossed London and Westminster or Alliance Bank.

**TO BE SOLD, FREE OF COMMISSION:—**  
25 Drake Walls, 25s. 9d.; 25 Prince of Wales, 35s. 9d.; 3 East Bassot, £4 6s.; 30 Terras Tin, 30s.; 25 West Pant-y-go, 15s.—each.  
Address, "X. X.," Mr. Barber, 13, Royal Exchange, London.

**MR. THOMAS CARTER, MINE SHAREDEALER,**  
CAMBORNE CORNWALL.

BUSINESS TRANSACTED, at close market prices of the day, in all the LEADING SHARES.

**MR. R. PERCY ROBERTS,**  
FINANCIAL AGENT,  
60, ENGLISH STREET, CARLISLE.

**MESSRS. E. BREWIS AND CO., STOCK AND SHARE DEALERS,** 18, BISHOPSGATE STREET WITHIN, LONDON, E.C.  
(Opposite the National Provincial Bank of England.)

Telegrams promptly attended to.

Bankers: The Alliance Bank, London, E.C.



**BICKFORD'S PATENT**  
FOR CONVEYING  
CHARGE IN

OBTAINED THE PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "FABRIQUE EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; at the "UNIVERSAL EXPOSITION," in Paris, 1867; and at the "GREAT INDUSTRIAL EXHIBITION," at Altona, in 1869.

**BICKFORD, SMITH, AND CO.,**  
OF TUCKINGHILL, CORNWALL, MANUFACTURERS OF PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—  
EVERY COIL OF FUSE MANUFACTURED BY THEM HAS TWO SEPARATE THREADS PASSING THROUGH THE COLUMN OF POWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS AS THEIR TRADE MARK.

**THE CORNWALL BLASTING POWDER COMPANY**  
ST. ALLEN MILLS, TRURO.  
Beg to call attention to their WARRANTED WATERPROOF SAFETY BLASTING CARTRIDGES, adapted for SUBMARINE BLASTING and USE IN WET GROUND GENERALLY.  
Prices and samples on application.

**Titanic Steel and Iron Company**  
(LIMITED),  
SOLE MANUFACTURERS OF

**R. MUSHET'S SPECIAL STEEL,**

For LATHE and PLANING TOOLS (requires no hardening);

**MUSHET'S TITANIC CAST STEEL,**

For ENGINEERS' TOOLS,

**MINERS' DRILLS, &c.,**

Forgings in Steel; Steel Shafting;

Piston Rods, Axles, &c.

Double Shear Steel; Spring Steel;

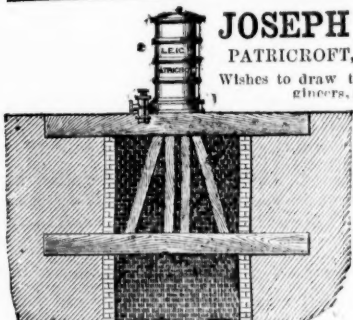
Blister Steel;

**"TITANIC STEEL WIRE RODS."**

**FOREST STEEL WORKS,**

COLEFORD, GLOUCESTERSHIRE.

**JOSEPH D. LEIGH,**  
PATRICROFT, near MANCHESTER,  
Wishes to draw the attention of Mining Engineers, and others, to his  
IMPROVED  
DIRECT-ACTING  
PUMPING  
ENGINE.  
Also, every description of  
WINDING  
ENGINES.



**LIGHTNING CONDUCTORS**  
AND CHURCH CLOCKS,  
PRICE £10.



**BAILEY'S**  
WINDING INDICATOR AND SIGNAL BELLS,  
AS MADE BY  
**J. BAILEY AND CO.,**  
FOR THE  
Collieries of the  
Bridgewater Trustees,  
Earl Bute, &c., to indicate the exact  
height of a cage in  
Mines.



Good and strong, price £4 4s.; worm and wheel, from 10s. to 30s. extra.  
BAILEY'S SIGNAL BELLS, 7 in. dia., each.  
DITTO, EXTRA STRONG, 11 in., 90s. each.  
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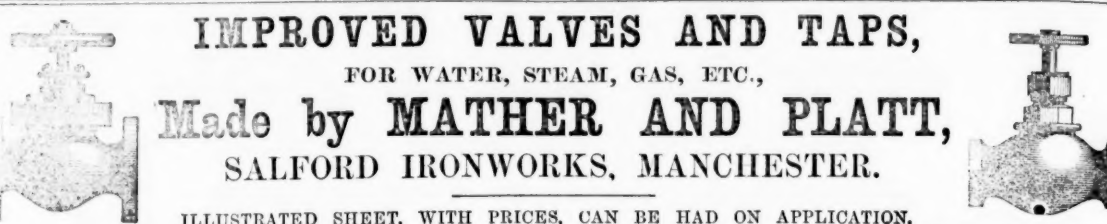
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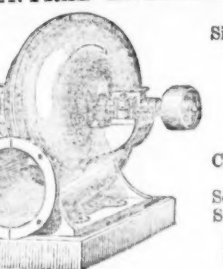
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CERTIFICATE.  
"I have used it successfully at several fires, and can with confidence recommend it as one of the most useful inventions that has ever been discovered to assist firemen in the discharge of their duties."  
(Signed) **ALFRED TOZER,**  
Superintendent Fire Brigade, Manchester."  
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Silent Fans, for blowing smiths' fires  
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### Original Correspondence.

VIRTUOUS LADY MINE

The Capital is 1,500,000 Dollars (say £300,000) in 60,000 Shares of 25 Dollars (say £5 each).

THE TRUSTEES AND DIRECTORS ARE—  
WILLIAM KEMEYS, New York—PRESIDENT.  
ALFRED F. KEMP, Staten Island—TREASURER.  
WM. N. ARMSTRONG, New York.  
GEORGE M. WHEELER (of W. Bailey, Lang, and Co.), Westchester County.  
EDWARD KEMEYS, New York.

SECRETARY—THEODORE CLARKSON, Brooklyn.

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AGENTS IN LONDON—CHILD, HORNBY, AND CO., 27, Lombard-street, London.

COUNSEL AND SOLICITORS—Mr. JOHN L. SUTHERLAND, New York,  
Messrs. KIMBER AND ELLIS, 79, Lombard-street, London.

The mine of this company is situated at St. Anthony's Nose, on the Hudson River, about forty-five miles from the city of New York. It is within ten miles from the city by railway, river, and road. The property lies in the township of Cortlandt, Westchester county, and the township of Pallisstown, Putnam county, both in the State of New York, and can be readily seen by reference to the map. The present workings of the property are on 52 acres (freehold), which lie in the township of Cortlandt. The company have in the same county, for lease, a tract of 250 acres of land adjoining the above property, and 30 acres in Westchester county, which the company have the right to purchase for \$15,000 at any time before Nov. 23, 1872, on which property also they hold a lease for 15 years still to run. The company are paying for this lease \$1500 for this year (1870), and will pay \$2000 for 1871, and \$2500 for 1872 and subsequent years until the lease expires, unless previously purchased, which it is intended to do, so as to enable the company to do. These lands cover everything known to be of value, and are in length about one mile. The river frontage of the property is 600 ft. in length, and is within 100 ft. of the channel of the river, where the company's new dock is being built, and is nearly completed, alongside which a vessel of 3000 tons can load.

CONTENTS OF THE MINES.—The mine now opened is found, as was anticipated, to be a mass of pyrites, consisting chiefly of sulphate of iron and a small amount of copper. Some nickel has been found in samples of the former assaying  $\frac{1}{2}$  per cent. to 6 per cent. If this should prove continuous, it will of itself be extremely valuable and profitable in addition to the sulphur and copper. These ores are mixed with quantities of hornblende, apatite, or phosphate of lime and felspar. The pyrites is of immediate profit, the sulphur ore only, when it is found in great abundance, and the nickel ore is of little value, as it is about 82½ per ton, while the rich copper ore is laid aside for the present, and stored to be dealt with hereafter.

and stored to be used when needed. Since the formation of the company, six years ago, they have had great difficulties to overcome in the dead work at the mine, and in opening up a market for the sulphur ore among the chemical manufacturers, both of which have now been accomplished. This period has been occupied in the construction and perfecting of the mine shaft, with connected level, tracks, cars, tramway, &c., besides the construction of the main tunnel, and the main adit and ready for drilling. The lower tunnel or adit level running into the mountain side, is 1,000 ft. long, and the shaft is 180 ft. deep. Not having been run to exactly meet, the two have been connected by large stops in the vein. Splendid ventilation has been thereby secured. Being from 700 to 900 ft. above the natural drainage of the country, the mine is insured against any serious trouble from water, and no pumping is

**PRESENT CONDITION.**—The directors are taking steps to procure the speedy completion of the tunnel, and the completion of the inclined road just finished, by the completion of a cutting of 50c. per ton or more will be effected in the road to the completion of the tunnel. The new road is a continuous inclined plane of about one mile. The road heretofore used is circuitous to the extent of about three miles, and has some up grades. The company has a market already for its sulphur ore at \$5 per ton. It has the additional advantage of a customer in the immediate neighbourhood, in a firm which has erected large vitriol (sulphuric acid) works alongside the company's own works. It is found that the ore makes as high a quality of vitriol as the Sicilian sulphur. The company is now learning to roast the ore more to such perfection as to extract all the sulphur to within a small percentage. The directors believe they have one of the best mining capitalists in the country. He has had many years' experience in England, and more particularly for the last ten years, in the State of Vermont, where he has managed a mine of similar character with great success. His name is Thomas Pollard. There are considerable quantities of sulphur and copper ores already discovered, and the prospect for finding more is very bright. Last year the company worked out (besides getting through the dead work) about 6000 tons of sulphur ore, and sold the same for about \$25,000 (say, £5000), which must be considered a fair beginning.

mines, and buildings at the mine consist of the house at the mouth of the tunnel, recommended by the engineer, which is 40 ft. long, 20 ft. wide, and two stories high, lined with bricks, with an addition, 20 by 15 ft., one story high, used as a wash-house. A large earth cellar, near the house, for keeping meat, vegetables, &c. (The house has had as many as forty men in it, and is well built, and comfortable.) The superintendent's house, two stories high, a very good house, new, and in all respects convenient and suitable for the purpose. A stable, with room for six horses, harness, &c. A new thoroughly-built blacksmith shop, with a furnace, and a bellows, and a set of tools. An office, where the weight of the scales where the ore is weighed. A changing-hutch, where the miners change their working clothes for clean ones, and a substantial shed over the dump and sorting-ground. A few small houses, costing \$300 each, would be very desirable as residences for married miners who have families, the boys working well as sorters of ore, and in many other ways being as useful as men, and much less expensive. The question of their erection is now under consideration. Many of the men find board with the surrounding farmers' families, and prefer living in that way. The workings are well planned and shaped. The

rock stands, without timber or masonry, as firm to-day as it did three years ago.

**COST, VALUE, AND PROFIT PER TON.** The net profits on the sulphur ore, now sold at \$14 per ton, are as follows: cost of sulphur ore, \$1.00; cost of sulphur ore on the dump, per ton, 75 cents; sorting, per ton, 25 cents; hauling to dock, per ton, over new road, 50 cents; all incidental expenses, office, experimenter, etc., 50 cents; total, \$2. Sold at the dock, per ton, \$5; profit, \$3 per ton. This is the highest price that has been obtained for sulphur ore, and is estimated at \$14 per ton. Many of the e-x-penses are taken too high, and will not be materially increased whatever quantity of ore be taken out in a given time. The improvements now going on will still further reduce expenses. It must be supplied that \$5 per ton is the highest price that could be obtained for the sulphur ore, as shown by the bar figure at present to encourage the manufacture of sulphuric acid therefrom.

**QUANTITY OF ORE.**—The mine is, properly speaking, a huge quarry of sulphur ore, actually visible, and open to the inspection of anyone. There is nothing imaginary or speculative about this. It is only as regards copper and nickel that it can be looked upon as a mine, and, therefore, upon this point only to

A FEW SHARES IN THIS COMPANY REMAINING UNSOLD ARE TO BE OBTAINED AT £2 PER FULL PAID SHARE, ON APPLICATION TO THE BROKERS.

**COATING FOR BICKFORD'S SAFETY-FUSE.**—In the manufacture of the miner's safety-fuse as heretofore practised the centre core of gunpowder or other inflammable substance has been surrounded by layers of flax, hemp, cotton or other material laid round the same, so as to afford a suitable coating and protection, and various descriptions have been employed. The invention of Mr. W. B. SMITH, Tuckingmill, consists in the employment of one or more materials, such as used in the manufacture of paper for coating the safety-fuse in lieu of or in addition to such varnish. This pulp may be used either as the only coating for the common safety-fuse or as an addition to other coatings now employed for such safety-fuse, the manufacture of which is well known.

**GETTING MINERALS.**—The invention of Mr. G. SIMPSON, Glasgow, consists mainly in arranging machinery so that the power may be applied at a distance from the point where the actual cutting operation is effected. By separating the motor from the tool, so that the former does not need to follow the latter in its motion, the wear and tear of the tool is reduced, and the intervals between comparatively long intervals, the framing or carrying parts can in consequence be rigidly fixed, and the action of the tool is rendered the more effective in consequence of the absolute steadiness thus obtained.

**STEAM ENGINES.**—Messrs. BABCOCK and WILCOX, Providence U.S.A., employ flat gylindron slide valves, one for induction and one for deduction at either end of the cylinder, operated in directions perpendicular to or transverse across the direction of motion of the piston. These valves receive a velocity from an eccentric in the ordinary manner. By the adjustment of these wedge-shaped eccentrics any desired amount of "lead," "release," or compression can be obtained. As the motion of the valves is slight and as they remain stationary while closed, a small amount of power suffices to operate them, without the necessity for resorting to any means for "balancing" them, and the durability of the valve surfaces is greatly increased.

**STEAM-BOILERS.**—Mr. E. GREEN, Wakefield, first takes a barrel of a length corresponding to the length of the flues, or thereabouts; this barrel has a series of longitudinal grooves, or overflows, and is secured by rivets, which are passed through the flanges of the tubes into the barrel. The narrow or smaller ends of the tubes are either formed with the flanges or them from the same piece or pieces of metal, or rim flanges are secured to them as is most convenient. The inventor arranges a series of such barrels side by side in a row, so that the whole of the surfaces of the barrels are subject to be acted upon by the combustion gases, and the steam is thrown off from it, with the exception of the fore ends, which come through the front wall and allow for cleaning out the sediment. The barrels touch one another to close up the spaces between them, and to form a roof or crown to the fire, and the flanges are secured to the front wall. The tubes of their way to the back of the barrel, and the flanges are secured to the front wall, and the uptake or chimney, or to side flues, as the case may be, are supported by the tapered tubes are connected near their ends by short tubes one to the other.

some extent speculative. The directors base their calculations of future earnings and profits upon the actual facts and experience derived from the last six years' workings, and more particularly upon that of the past year. These calculations are verified by Prof. Raymond, Mining Engineer to the United States Government, who reports that the mass of solid ore now exposed to view, and ready for breaking down and carting away for sale, amounts to at least 40,000 tons:—In the stope from the cross tunnel to bottom of the shaft (say), 16,000 tons; in the stope from the upper drift down to the large tunnel stope, 10,000 tons; in the ground south of the shaft, 14,000 tons; total, 40,000 tons of sulphur ore, estimated at 10¢ per ton. The mass of solid waste rock, or barren material, in the copper ore. In the ground south-west of the shaft, there are about 45,000 tons more ready to be opened up, without any dead work. There cannot reasonably be any doubt of the continuance of the deposit in depth, and there is at least 700 ft. in perpendicular height yet. Besides the deposit now worked upon there are, doubtless, parallel recurrences in the same zone. Where one rich ore-body thins out another will be found to set in, and this metalliferous series continues for miles from the surface mile, as is indicated by the outcrops traced for that distance. Hence the company can, at any time, find some other outcrop, and double the rate of production. The capacity of the mine is, therefore, practically beyond limit.

**ESTIMATE OF PROFITS.**—Upon the foregoing moderate calculations, there will be a net profit on the ores now in sight or available without any deep work being needed, as follows:—In tunnel stopes: sulphur ore, 35,000 tons, at \$3. profit \$105,000 (\$21,000); copper ore, 5000 tons, at \$14. profit \$70,000 (\$14,000). In south-west ground: Sulphur ore, 40,000 tons, at \$3. \$120,000 (\$24,000); copper ore, at \$14. \$560,000 (\$112,000); total, \$680,000 (\$138,000). It will probably take, with the present force of men, about 18 months to extract the above, but it depends entirely upon the number of men the company choose, or their finances permit, to be employed. It can be pushed ahead much faster than this. However, calculating at this slow rate, the above would give a return equal to 8½ per cent. per annum on the nominal capital of \$1,500,000. It is not probable that the company, and the other manufacturers of the great and increasing demand for the ore among acid and vitriol manufacturers render it safe to look forward to a steady prosperity.

**ASSAYS.**—The company sent to London some samples of all the ores (selected) promiscuously by Mr. Alfred Kimber, C.E., Associate of King's College, London, who visited the mine for the purpose to be assayed by Mr. Frederick Claudet, of London. These samples, rich and poor together, were analysed and reported on by him as follows:—No. 1 samples, magnetic pyrites, No. 2 samples, copper pyrites, lead pyrites, and galena, No. 3 samples, Sulphur, No. 1, 34.45; No. 2, 22.99; No. 3, 41.15; No. 4, 37.56; copper, No. 1, 2.99; No. 2, 2.99; No. 3, 2.99; and traces of cobalt, No. 1, .60; No. 2, .46; carbonate of lime, No. 1, 3.50; No. 2, 4.63; insoluble rock, No. 1, 8.40; No. 2, 18.40; moisture, No. 1, .20; No. 2, .20; oxygen and loss, No. 1, .77; No. 2, .95; total, No. 1, 100.00; No. 2, 100.00. Mr. Alfred Kimber writes that "as a pyrites mine (sulphuret of iron) it is a great credit to the country, and the quality of the ore may be taken as a fair test of the quality as regards the sulphur. From the appearance of the ore now coming out, the future of the mine is very good as regards copper. You cannot find a single piece of ore that does not show copper, and the quantity of rich copper ore seems to be increasing." The company had a lot of 50 tons ore, ore tested on July 14, 1876, by Prof. Claudet, at the School of Mines, Columbia University, New York, and received his certificate that it contained 7.63-100ths per cent. of copper.

**PROSPECTS AS TO COPPER.**—The miners are steadily coming to more copper and all will have to be more economical, which is that it is a great copper vein. The numerous heaps of copper ore, more or less concentrated, which the aborigines dump cry aloud to be utilised, but until recently there have been no American purchasers of 3 per cent. to 7 per cent. ores of copper. Professor Raymond, before mentioned, reports that "as the work has progressed it is found that the magnetic sulphure of iron has become purer and massive, and contains less of hornblende and felspar, while the sulphure of copper in the stripe fonn is in the hanging wall is richer;" and he "emphatically repeats the opinion that in depth the percentage of copper will increase. It is confirmed by the actual experience of the mine." Mr. Alfred Klinker writes "that he feels more and more convinced every time he goes to see the mine of its great future. The ore is fast apt-acching that point when it will be difficult to know how to sort it. It is fast becoming so that the sulphur, and the iron sulphur, and increasing to such an extent that it will be difficult to say which will be the sulphur ore, and sold at \$3 per ton, or whether it would pay to sort for copper ore at \$3 a unit, which for 6 per cent. copper ore at \$3 a unit would give \$18 per ton. The dead work to be done in the mine is positively nothing, and the ore is coming out so free from rock that it only requires sorting for copper."

The running expenses owing by the company did not exceed \$500 (176*l.*), on Aug. 31, 1900, and, in addition to the company for stationery, sold and delivered, amounted to \$200 (18*l.*) on the same date. The balance of cash in the hand of the treasurer is \$200 (£40*l.*). The company have no debts or encumbrances of any kind, with the exception of a mortgage for \$573 (€114*l.*) remaining on the Putnam County property, which the company are ready to pay off whenever required. The fiscal year of the company ends on the second Monday of October, and the annual meeting of stockholders is held at the office on the fourth Monday in October of each year, at two o'clock. The principal office of the company is at 22, William-street, in the city of New York, where the books are kept.

A copy of the constitution and bye-laws of the company, and of the laws of the State of New York relating to the same, can be seen at the office of the company, situated at the Kings Arms, No. 70, Lombard-street, London, and at the office of the solicitors, Messrs. Ellis, Esdaile, and Co., of the same place, by whom shares will be received and forwarded, when required, for registration. The shares are transferable by simple endorsement of the share certificate, and the holder can have his own name registered in the company's books and can, if he pleases, on production of the certificate so endorsed.—W. KEMPEY, President  
ALFRED F. KEMP, Treasurer: T. CLARESON, Secretary.

[All the figures have been reckoned at \$5 to the £1 on both sides, for convenience of calculation by English shareholders.]

to preserve the water level and allow of the steam mixing. The tops of the tubes are closed by covers, which are bolted down to inside flanges on the tubes to make them steam tight.

**CONVERTERS.**—Instead of forming the converter with hollow trunnions, and driving the blast through the same, and through a connecting pipe and side of the tyure box, and closing the latter with a fixed cover in the usual way (and thereby preventing access to the tyure box without removing such cover), Mr. J. WEBSTER, of Birmingham, forms the converter with solid trunnions, and with a circular and flanged belt and segmental hollow jacket, through which the blast is driven, and in which the flanged belt works air-tight.

**CHALLENGE TO THE WORLD.**—The *Bristol Daily Times* and *Mirror*, Aug. 15th, has the following: Messrs. J. C. Swaa and Co., of 16, Queen-square in this city, have invented a pocket microscope, which is a marvel in all such an instrument should be. It has great power, remarkable definition, and does not require focussing. The cheapness of the article will make it exceedingly popular when its merits are more widely known. It is called the "Bristol Microscope," and is a great credit to the inventor, as much for its extreme simplicity as its power.—The *Western Daily Press* says: "The Bristol Microscope is a most perfect and powerful instrument, and is capable of magnifying objects 1,600 times, &c.—The *Western Daily Telegraph* says: "The Bristol Microscope is the most compact and useful scientific instrument we have ever seen; it possesses extraordinary power, and is very easily managed &c. The price of the Bristol Microscope is only 2s., or free by post, with printed directions, for 28 stamps.—Address, J. C. Swan and Co., Opticians, 16, Queen-square, Bristol."

**BREAKFAST—EPPS'S COCOA—GRATEFUL AND COMFORTING.**—The very agreeable character of this preparation has rendered it so general a favourite, that it is now becoming a household word. It is the result of a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavoured beverage which may save us many heavy doctors' bills. It is suitable for all seasons of the year, and for all constitutions. Also, makers of Epps's Cacaoine, a very light, thin creaming beverage.

**HOLLOWAY'S OINTMENT AND PILLS—SKIN AFFECTIONS.**—In all diseases which affect the skin, unless caused by external violence, there exists throughout the system a morbid circulation of blood, and in such cases the disease is the disorder can be thoroughly extinguished; hence arises the necessity of the conjoint treatment, or the local cure effected by Holloway's Ointment, and the constitutional remedy so admirably furnished by his pills. Throughout the whole history of medicine, no drugs ever before discovered possess powers equal to Holloway's purifiers, which readily remove deep-seated and inveterate diseases. Their action on the blood is so mild, and yet so powerful, that they dispossess the possibility of applying them erroneously, and their lenient nature prevents their doing harm to the most delicate constitution.

SIR,—As the Virtuous Lady Mine, in consequence of recent discoveries, is likely to occupy a prominent position in the attention of the mining world during the current year, a few words on the famous old mine may not be uninteresting to your readers.

It is situated in the celebrated Tavistock district—the richest for copper in England—near the junction of the killas and the granite, the geological position of nearly all the great mines. The rivers Waltham and Tavy, which here form their confluence, supply it with water-power inexhaustible, unfailing in every season of the year, and which the company now working it have found of paramount importance in carrying out their extensive explorations. The past wealth of the *Virtuous Lady* is almost proverbial in the district; tradition representing it as having been worked by a copper-miner's daughter during many centuries—an assertion which the immense size of the enormous quantities of ores, and the nature of the crude system of working, and the imperfect appliances then at command and the exhaustion of the labour, and the representation of the labour of many generations of workers. Government is reported to be about to establish a volunteer instruction camp on Roborough Down. Should the troops at any time be so unfortunate as to have their tents or huts blown away, or to be placed in a position by an unexpected hurricane, or be left shelterless from any other cause, they would be as well as the copper-miners of the *Virtuous Lady*, at the foot of the Down, where they will find a greater protection for ten times their number. The "results" of these old workings may be inferred from their vast extent, since it is in the highest degree unreasonable to suppose that labour and capital would have been expended for successive centuries, as it was, on a mine of so trifling a magnitude. Men soon find out whether a mine pays, and this mine, to have been worked so continuously, must have been a continuous success.

More recently, in about twenty years ago, this mine was worked by a small private company; with what results is shown by the steward's books of the estate, lately in which it is situated. These show the landlord's dues to have been upwards of 1000*l.* a year, and dues of between 1000*l.* and 2000*l.* at a royalty of 1-18*th*, representing returns of between 20,000*l.* and 30,000*l.* per annum. This was from a small, limited system, and at a time when the price of copper was not so high as it is now. Putting these facts together, it is clearly evident that the mine has been in the past a great and continuous success. But these results have been obtained from the partial development of two lodes only. The sett contains numerous other lodes, some of which are equally promising in their characteristics, and are evidently members of the same rich family, equally well adapted for productive purposes. It is accordingly the object of development to work one or more of these remaining lodes, and notwithstanding the somewhat limited exertion, the reward of perseverance is being brought within their reach. The great south lode, so long driven on, is now making ore at the rate of from 80*l.* to 100*l.* per fathom, and bids fair to fully rival, if not surpass, either of the two lodes which have proved so productive in the past. The mine may accordingly be said to be in the most favourable position, if not the richest, in the two counties. But, as stated above, there are in the sett other lodes, representing the same family indications, only waiting for the aid of labour to pour out their riches. Within 8 fms. from surface at this point in the south lode is the great caunter, and a few fathoms only further south is another great parallel lode, with mineral cropping up to the light of day. Both these will in due season be worked, and will, it is believed, already 60 fms. from the south to reach their treasures, which, if the counterpart of those of the original Virtuous Lady lode, will be almost practically inexhaustible.

Did the prospects, therefore, of the *Virtuous Lady* rest on copper alone the proprietors ought to consider themselves fortunate men; but, more fortunately still for them, such is not the case. Valuable tin lodes have been discovered on the other side of the sett (on which operations have been for some months carried on), which will send their produce a few weeks hence to market, and which will in themselves alone constitute a valuable mine. There is, in addition, a lead lode of promise, to be "proved" in due time.

The whole of that debt can be developed without the aid of steam—that insatiable monster which devours the profits of so many mines—there being ample and never-failing water-power for all purposes. The situation with reference to transport leaves nothing to be desired, being within easy reach from one extremity of the sett of the quay of the navigable River Tamar, and from the other of the Horrabridge railway station. While on the one hand, therefore, the quantity of mineral is practically unlimited, on the other the unusual facilities for working and transport combine to reduce the expenditure to a proportion unusually low—or, in other words, to raise the profits exceptionally high. These are the prospects to be offered that the promoters are, to the ears of his principal advocate, “most glowing,” and that there are few enterprises at present before the public offering to the investor such promise of speedily and great returns.

and great profits. I have purchased his shares a twelve-month since at the current market price after repeated inspection (both personal and by deputy) of the mine, and who has recently increased his interest on the strength of the discovery made, I cannot but be pleased at the verification of my original opinion respecting it, and may, perhaps, be pardoned for writing so fully of this celebrated old mine, now, fortunately for myself and others, renewing its youth and vigor, and producing a new and valuable national source of wealth in the mineral district to which it belongs. This district has been too much neglected of late; but it is still true that "there are as good fish in the sea as ever came out," as the proprietors of the Gem Mine and one or two others not yet known in London are proving to their own satisfaction. The fact is, the district is as rich as ever—equally able and ready to reward enterprise; and I have no doubt that the capital and energy that will turn its producing capabilities to account

Jan. 24. ————— VERAX.

VIRTUOUS LADY.

Sir.—Surely your correspondent in last week's Journal, signing himself "a shareholder," ought to be labelled with the name of his own agents as the "value" of this property without rushing into print, and dragging the modest secretary to a full explanation as to why he did not inform every shareholder that some great and lasting improvements had taken place at the Virtuous Lady, especially after Mr. Barnard has so feelingly expressed himself that "they who are whole need not a physician." Many mines are kept alive and sustained by quickery, but as the true guardian of the Lady has never yet been discovered and no one has as yet offered to take the place of the old measures of his fair "La Dame Vertueuse." Mr. Barnard always has said—"Give me time, and astonishing riches shall flow from this mine." His "prophetic soul" ranged the deep recesses of a "coquettish nature," and his practical eye saw wonderful evidences of vast deposits of minerals, and he predicted that it would be a great and valuable property. Happy, and most happy, am I to say that his prediction is being fulfilled. The No. 1 tin lode, or No. 1 lode as it has been called, has been struck in the sixth level, there is 10 to 12 tons to the ton, promising to yield thousands of tons of ore; Metherell's end is leading to a course of ore; the cross-cut will soon reach a rich caunter lode; the No. 1 tin lode is worth fully 100*l.* per fathom; the No. 2 tin lode, 20*l.* per fathom; a new water wheel was started on Tuesday; the 2 stamps are ready, will be at work in a few days, when large returns of tin will be made, and by the end of February some of the tin will be ready to sell. Let me say that the very way in which the property is at last, and turning out the great price promised by Mr. Barnard, whose success in this mine must be very gratifying to every shareholder, and a convincing proof that his opinion on mining matters will hereafter be valued.

[ADVERTISEMENT.] J. SUMMER.

VIRTUOUS LADY MINE—THE QUEEN.

SIR,—Allow me to hasten to the relief of the mind of "Shareholder," whose greatly fear must have been suffering from severe indisposition when penning his good and kind letter. I am glad to hear that he is now able to write, and myself no longer immaculate in his eyes; but perhaps a few words of explanation will restore me to the exalted position I seem to have until lately held in his estimation. I am neither "bull" nor "bear"—am simply a buyer of Vituons Lady shares at 18s., seller at 29s., and if that little matter is to destroy my reputation as a fair and honest trader, I am sorry that the report of the agents of the mine is inserted in the Mining Correspondence, but that future will appear every week. As regards the appointment of additional managers or agents, that matter is, by the company's Articles of Association, left to the discretion of the directors. We shall have our next general meeting upon about the date mentioned in the Articles; but, as that does not occur before we have had our annual meeting, I am sorry to hear that "Shareholder" is at one of our London offices in the course of a few weeks, and as I have not yet seen penny on account of the salary voted to me, no doubt the grasp of the hand will be the less icy, and, at the same time, I can congratulate my unknown friend upon his ready wit and narrow escape of having sold his shares at an inopportune time to those who were consequently picking up the bargain. I am sorry for the dilatoriness of engineers and Ironfounders, no doubt their faults are legion. Let them answer for themselves. However, in this case, we were in a hurry to start the stamps until we had discovered sufficient tinstuff to keep them going, and, now that we really have, I am making arrangements for the contract will be entered into for the contract will be entered into for the to be at work four weeks after date of order.

to be at work four weeks after date of discovery. I have referred your readers to the reports of Capts. George Rowe and H. Horvath, who value both copper and tin lodes at 50l. per fathom. We have now, as it were, just commenced to work the mine. This is not a great success I predicted—nay, what we now have is but a preliminary to the future brilliant *démouement* which will follow anon. I request you, my friends and foes, to be honourable; give me fair play, and, in the language of a Shareholder, I ask a simple question—Can any mine in Devonshire be found to-day which is so rich in copper and tin as this? Can any mine be found with her extraordinary water-power, over 4500l. in hard cash, and not called up capital to develop her numerous resources, and tin and copper lodes of such high money value as 50l. per fathom? This is, indeed, a glorious triumph, and if the lodes only last as they now are, and there is more reason to expect increases of value and discoveries at other points of the mine, a few months will enable me to return thousands of pounds worth of mineral per ton. It is possible, I fear, but I give my opinion on this subject as a disinterested man. It is a great thing to have a mine under the fresh Bank of England. Then, no more green

QUEEN.—I predict that the mine will be a success. I doubt the great value of the mine, and another fortnight or three weeks will tell the tale—so there is not long to wait. By the indications at the surface, and the improvements of the lode at the 40, I have worked out the problem by facts and figures, and it is, in my mind, as certain as fate that we shall have a rich lode at the 40, where we have been looking for it. In the next 60 fathoms there is thine until next June, when we shall be down to the 65, at the junction of the lodes, and the Queen will be one of the best mines in England—the shares 3*l.* each, and dividends 2*s.* 6*d.* per share, instead of 1*s.* 6*d.* per share, and the best investment of any day possible individual or domestic. I do not think that I have been so successful in my life, and I may now advance them 25 per cent. in price, and I advise their immediate purchase.

Tamar House, near Tavistock, Jan. 26. THOS. J. BARNARD

[For remainder of Original Correspondence see this day's Supplement.]



## Meetings of Mining Companies.

## BRYNPOSTIG MINING COMPANY.

A special general meeting of shareholders was held at the Great Western Hotel, Birmingham, on Jan. 18, to pass the following resolution, authorising the issue of debenture bonds to the amount of 5000*l.*:—"That the directors be empowered to raise a sum not exceeding 5000*l.*, by the issue of debentures to carry interest at 7*l.* per cent. per annum. The due payment of such debentures, with interest thereon at 7*l.* per cent. per annum, to be secured by a mortgage with a power of sale to trustees, on behalf of the holders of such debentures, of the leases, mines, machinery, plant, and other properties of the company; such trustees to be appointed by the directors, and the directors, or one or more of them, may be such trustees or trustee. And any person who may have, prior to the passing of this resolution, advanced or consented to advance any portion of the said sum of 5000*l.*, shall have the benefit of the above security. Debentures to be payable in three years, and to be for such amounts as the directors shall determine, and the directors are hereby authorised to do all things which may be necessary to give full effect to this resolution."

Mr. JOB TAYLOR, J.P., in the chair.

The CHAIRMAN said that although the step now proposed to be taken was an absolute financial necessity, his opinion as to the future success of the mine was in no way changed. It should be recollected that it was agreed some time since to raise an additional capital of 5000*l.*, and had that amount been subscribed the present measure would have become unnecessary. The directors' opinion was attested by the large interest they held in the company, and by the fact that, in addition to their large holding, they had pledged their personal credit to the extent of 500*l.*. They did not, however, think themselves justified in finding more cash without first ascertaining the shareholders' views. Hence the present meeting to ascertain their opinion upon the matter, and to let them know the exact position of the company, leaving it to them to determine whether or not they would subscribe towards the additional capital. He fully believed all that had been said about the mine would be amply realised, provided the executive were not crippled for want of capital. He sincerely hoped that the shareholders when appealed to would, in justice to themselves, come forward without delay and subscribe the necessary capital, for unless the whole amount was forthcoming at once it would be impossible for the directors to carry on the mine. With those few remarks, he would ask Capt. Kitto to read his report.

Capt. J. KITTO read his report, as follows:—

In handing you my report of the above mine, I beg to inform you that since the last meeting of shareholders we have completed the sinking of the engine-shaft to the 60, divided and eased the same to the bottom, put in ladder-rod, and have driven 10 fms. 3 ft. east and 1 fm. west on the course of the lode. In the eastern drive the lode is large, and yielding a little ore, but we may reasonably expect this to improve daily, as we are now getting into the run of productive ground that has yielded all the ore in the levels above; and what makes it all the more certain is the fact that we have within the last day or two drained the 48 dry, and have resumed the sinking of the sump below, which we had to suspend a short time since on account of the strong feed of water. This sump to which I refer will go down through the ore ground for the purpose of ventilating the level below, and opening out the ground for stopes. We have suspended driving the 48 east, (which is the same as the 36 west, and the furthest advance) in search of fresh bunches of ore; the lode in this end is looking much more kindly than it has for a considerable time, and is letting out a large quantity of water, which indicates its near approach to ore-bearing ground. This (36) level is now fully half way between the engine and No. 3 shaft, and is being driven at the rate of from 5 to 6 fms. per month. The 48 west has been driving for some time past through a most promising lode, always yielding a little ore, but not rich enough to pay; and we are, I am sorry to say, exposing its producing qualities to improve, and I am sadly disappointed at not having the pleasure of reporting to you to-day a good and valuable discovery in this part of the mine. In fact, I have never seen a more kindly lode, or one more likely to produce a large quantity of ore than is now to be seen in this end, and although disappointed so far I am still sanguine of success. This level was driven last month 10 fms. 2 ft., and is now extended from the engine-shaft 46 fms. 4 ft. We have one tribute pitch in the roof of the 48 working by eight men, at 5*l.* 10*s.* per ton, which is yielding a fair quantity of ore, and a small one in the 36 level, upon the above is communicated to the 48 which will be in a position to let two others at, I expect, a reduced price per ton. For the future development of the mine I would suggest that the 60 east be driven through the run of ore ground which we are just entering upon, and that the 48 west and 36 east be pushed forward with full force in search of fresh discoveries, and that the ore ground be stoped away as it becomes available. This I consider is all that is necessary to be done in order to improve the mine, and to put it in a position to meet the requirements of the shareholders. Our machinery is in good condition, and equal to our requirements for effectually proving the value of the property, and I have still great confidence in a successful result.

Mr. OWEN (a director) mentioned that the directors had power to take the course now proposed without the sanction of the shareholders; but in this, as in all other matters, they desired to confer with their constituency, feeling certain that as soon as the real circumstances and position of the mine had been made known, they would for their own safety, as well as for the safety of their property, feel it their duty to forward and assist the directors. As the CHAIRMAN had stated, the directors being the largest shareholders had done all they could to protect the shareholders' interests by advancing their own money, and it was but fair that they should at least have the financial co-operation of the proprietors.

The CHAIRMAN mentioned that the directors and manager held 6000 shares, or more than one-third of the entire capital of the company.

Capt. KITTO, in reply to questions, stated that the returns would probably not exceed 7 or 8*l.* per ton until the 60 had reached the ore ground gone down in the level above. The returns would then, of course, be very much increased, especially if the lode continued good.

A SHAREHOLDER asked if the current returns would meet the cost?—The CHAIRMAN replied in the negative, stating that the dead charges were as great for the present as they would be for largely increased returns. He might mention that each director had paid for all the shares they held the same as the shareholders, and received no remuneration whatever for the time and attention they gave on behalf of the company.

Mr. TERRY asked when it was thought the mine would pay its way?—Capt. KITTO said if the 60 came into ore ground of the same character as in the level above, the expenses would be at once met by returns.

The CHAIRMAN was of opinion that the shallow ground should also be developed, for apart from depth he looked for successful results in that direction. He was not, however, at all sure that the mine was going to fail in depth, for where, he would ask, was the mine—however rich it might be—that had not had its poor levels?

A SHAREHOLDER asked the value of the security that would be offered to the debenture holders?—The CHAIRMAN said that upwards of 20,000*l.* had been expended, in addition to which there was the value of the mine.

After some further discussion, the resolution embodied in the notice convening the meeting was proposed by Mr. TERRY, seconded by Mr. SPRAQUE, and carried unanimously.

Mr. OWEN said he had not only gradually increased his interest from the commencement, and taken his allotment of new shares, but had endeavoured to purchase for other parties. The directors were sanguine of results. Mr. Henry Pearson, who has had great experience, had personally examined the mine, and felt perfectly satisfied it would become a remunerative property if sufficient capital was expended upon it. Mr. Pearson had urged the necessity of keeping the expenses down to the lowest point, which Capt. Kitto was doing. Capt. Kitto's opinion of the mine was best stated in the fact that he took 500 of the last issue of shares, his present holding being 1000.

Capt. KITTO said he should not have taken 500 of the new shares if he had known the other shareholders would not have subscribed for their proportion; but if the present measure met with their support, Brynpostig would yet satisfy him and all associated with it.

A vote of thanks to the Chairman and directors terminated the proceedings.

## EAST PLYNLIMMON LEAD MINING COMPANY.

The annual ordinary general meeting of shareholders was held at the offices, Austinfriars, on Jan. 20.

Mr. J. J. PYNE in the chair.

The LONDON MANAGER read the notice convening the meeting. The report of the directors was read, as follows:—

Since the last general meeting your board have visited your property several times, and have pushed the work with as much speed as possible. The cross-cut going north (near the Plynlimmon boundary) to intersect the Plynlimmon lode has been driven during the past year 67 fms., and has just passed through a lode which may be the Plynlimmon, as you will see from Capt. Paul's report, but your board intend to have this cross-cut driven a few fathoms further, in order to prove this. At the eastern boundary of the sett, near the River Wye, the adit level has been driven on the lode during the past year 22 fms.; but the end being so unproductive, your board have determined to suspend this point at present, and use all the force possible in sinking the shaft which is going down in a very promising lode, composed of clay-slate, mudstone, and spots of lead ore. Although your directors regret better results have not been attained during the past year, they still believe in the value of the property; and, from the very promising appearance of the lode in the bottom of the shaft, have no reason to doubt but that some good discoveries will in time be made.

The report of the manager (Capt. John Paul) stated that—To the east of the Plynlimmon Mine boundary a deep adit cross-cut has been driven north 129 fms., and has just passed through a small vein or lode, which probably is that worked upon in the Plynlimmon Mine, and which has been yielded so much lead ore, but in several points in the Plynlimmon Mine (where without ore) it is of the same character, and no larger than that of the cross-cut in East Plynlimmon; and by driving upon it east and west of the cross-cut it may soon open out much larger, and produce lead ore. The cross-cut is being continued as before to prove whether this may not be a branch of the lode, and the real vein still some fathoms before it, as branches or strings are frequently thus come upon before the main lode is reached. While driving westward on the lode now seen he would recommend the cross-cut to be driven northward in search of the lode which can be seen at surface, about 45 or 50 fms. (the north of the Plynlimmon engine-shaft, and from that point appears to go towards the Plynlimmon lode in going eastward, and may be expected to be attained by a further extension of the deep cross-cut for 35 fms.; this lode has not yet been worked on in the Plynlimmon sett, but is 3 ft. wide where seen cropping out. An engine-shaft has been sunk 19 fms. from surface, or 12 fms. under the adit level, and by now, only for the frost, which has prevented pumping, &c.,

would be down to the 14, where it is proposed to drive out east and west on the course of the lode. The shaft is now being sunk in a lode 6 ft. wide, containing a large quantity of mudstone, which he believes indicate good bunches of lead ore at a greater depth. A 22-ft. water-wheel, 4 ft. in breast, with line of pumping-rods, &c., attached, has been erected, and a drawing-machine is upon the mine to be applied forthwith. Although the operations so far have not given satisfactory results in opening ore ground as was at first expected, he believes good discoveries may still be looked forward to from further explorations at the deep adit cross-cut, and by deepening the engine-shaft to prove the eastern part of the mine.

The CHAIRMAN moved that the report and balance-sheet be received and adopted. He did not know he had anything to add, except to state that he had personally visited the mine several times, and that he believed it would prove successful in depth. He had very great faith that they would have a very good lode at the 50, and believed that what they had just passed through was merely a branch of the lode.

Mr. CHARLTON having seconded the proposition, a discussion ensued upon the point as to whether the branch or lode cut was the Plynlimmon lode. Capt. PAUL stated that he had seen the Plynlimmon lode in the Plynlimmon Mine not more than 6 in. wide, and afterwards open out as rich as ever.

Mr. MURCHISON mentioned that in Plynlimmon the adit level had been driven 165 fms., of which 150 were in ore ground. Capt. PAUL said that, taking the respective bearings, the only conclusion was that it was not the same lode, and that they had yet to cut it. He added that the sett had been about 1 mile in length.

The report and accounts were received and adopted. The CHAIRMAN said the directors were very anxious to economise in every possible way, and consequently had decided to receive only one-half of their remuneration, and the London manager and Capt. Paul had kindly consented to do the same.

Mr. BELL, upon his re-election as director, stated that no effort on his part would be spared to make the most remunerative property.

Mr. Baller was re-elected auditor. A vote of thanks was passed to the directors and to the London manager and Capt. Paul for the liberal manner in which they had come forward and voluntarily reduced their remuneration one-half. The usual courtesies to the Chairman terminated the proceedings.

## WEST STIPERSTONES LEAD MINING COMPANY.

The annual general meeting of shareholders was held at the offices, Austinfriars, on Tuesday.—Mr. COPE in the chair.

Mr. FRANKLYN (Secretary) read the notice convening the meeting.

The directors' report stated that immediately on the formation of the company the directors, in accordance with the recommendations of Capt. Williams, of the Van Mine, and Capt. A. Waters, of the Tankerville Mine, instructed their agent, Capt. R. Waters, to immediately commence the sinking of the new engine-shaft on the Roman Gravel vein, and to prepare for the erection of a water-wheel. The report of the manager, Capt. R. Waters, states that all the preliminary work necessary to enter upon the full development of the various lodes in the company's property, and of the Roman vein in particular, is accomplished, and the sinking of the new engine-shaft below adit will be proceeded with at once. The new engine-shaft continues to go down in a rock most congenial for the production of lead ore, now down 6 fms. below the adit, and sinking at the rate of 3 fms. a month. There is a branch or lode in the present bottom, sloping towards the main lode, and from the large cavity therein they feel persuaded when the shaft reaches the said main lode that a productive mine will show itself. The adit shaft is driven from shaft about 60 fms., and is now crossing a country rock that is letting large quantities of water. They are looking every day for a discovery across their track, there being several lodes ahead. The machinery is working well. The total expenditure during the year, including machinery, was 1260*l.* 16*s.* 11*d.*, and the balance in hand 1888*l.*, which the directors are advised is amply sufficient to fully develop the mine.

The CHAIRMAN said that the directors in their report endeavoured to epitomise the whole of the proceedings since the last meeting. Something like three months had been lost by hindrances which could not have been avoided, otherwise they would have been down to the 22 fm. level, at which depth they hoped to see something of the Roman Gravel lode, but that point would probably not be gained until about the end of March. As to the accounts, he thought the directors deserved commendation for the manner in which they had conducted the business, and every detail of the report and preliminary expenses, instead of being as in some cases 1000*l.* or 2000*l.*, did not exceed 240*l.*, and in the year's expenses of 1260*l.* there was included a substantially-built water-wheel, and after every expenditure had been provided for there was cash at call of 3500*l.*, and a balance in the hands of the bankers of 380*l.*. He thought they might look forward with confidence to find the capital sufficient to sink the mine to a depth far below the point which would prove it to be more than a speculation. He moved that the report and accounts be received and adopted.

Mr. GEACH seconded the proposition. Capt. WATERS explained at some length the prospects at the different points of operation. The engine-shaft was sunk 7 fms. below the adit, and the adit had been driven south 66 fms. The lode in the adit was about 4 in. wide, and 8 ft. below it increased to 18 in., a good portion of which was lead ore. Capt. Williams, manager of Van, was the last person in that sink, owing to the water, and he expressed himself perfectly satisfied with what he saw. Every fathom the shaft was sunk the nearer the lode was approached, and any day the water might be taken off that lode, when they would be able to sink on the ore. The old mine was also being drained, which was 100 fms. from the new shaft. He anticipated during the coming summer to see sufficient in the old mine to justify their erecting an engine.

Mr. SLOUS asked how far the new shaft was from Roman Gravel?—Capt. WATERS said that it was three-quarters of a mile from the old mine.

The CHAIRMAN said that he had heard Capt. Williams had stated most confidently that the Roman Gravel vein would be cut in West Stiperstones. Mr. GEACH said that it was pretty well admitted by the Roman Gravel people themselves.

Capt. WATERS said that when he first became associated with the district, some 13 years ago, a 26-in. rotary engine was erected, the shaft sunk, and a cross-cut was made to the lode, but it was never reached. He added that at the south part of the sett he expected to meet with the Old Bog, and also some of the Pennerley lodes. No difficulty on account of water would henceforth be experienced, inasmuch as he had obtained from the lords' agent liberty to cut a drain from the Stiperstones Mine, where there was a constant feed of water; and at the Old Bog Mine a 70-in. engine was being erected, which would be in operation in about two months. All the water that engine pumped to surface was sent to West Stiperstones—that was independent of the Stiperstones water, where they were dressing from 60 to 70 tons of lead per month. It was impossible to select a better place throughout the whole Shropshire district for a water-wheel than at West Stiperstones. There was ample room to erect any extent of dressing-floors, in addition to which there was a large reservoir, which must have cost 500*l.* to 600*l.* to construct. He added that Capt. Williams, of Van, had expressed the highest opinion of the future of the mine.

The report and balance-sheet were received and adopted. Upon the proposal of Mr. STOUTS, seconded by Mr. H. GEACH, it was unanimously agreed that the directors should receive 100*l.* as their first remuneration, and in future 50*l.* each per annum.

The CHAIRMAN, in acknowledging a vote of thanks to the board of directors, stated that he fully believed this property possessed the germs of a very great and successful future. The usual courtesies to the Chairman terminated the proceedings.

## PORT PHILIP AND COLONIAL GOLD MINING COMPANY.

A general meeting of shareholders was held at the Cannon-street Hotel, on Wednesday.—Mr. HENRY MOOR in the chair.

Mr. C. H. FIELDER (the secretary) read the notice convening the meeting.

The report of the directors stated that the return of gold for the year had been small, and compared unfavourably with previous years, the average yield being only 4 dwts. 2 3/4 grs. per ton, against 7 dwts. 8 grs. last, and 8 dwts. 25 grs. the preceding year. For the first ten months the yield from 100 tons of ore came up to an average of 4 1/2 dwts. per ton. During the month of April it fell to the unprecedented low average of 3 dwts. per ton; the last three months show a considerable improvement, the average being 5 dwts. 15 grs. per ton. The pyrites and blasket and treated during the year amounted to 456 tons 16 cwt., and produced 1420 ozs. 6 grs. of gold, or 12 grs. per ton on the total quantity of quartz crushed. The quantity of quartz crushed during the year was 12,187 tons, was 55,240 tons, being a decrease of 9033 tons against the previous year. The production of gold, including that from pyrites, &c., during the same period amounted to 13,441 ozs., being a decrease of 9949 ozs. 17 dwts. compared with the yield obtained in the previous year. The average yield per ton on the quantity crushed from the commencement—565,595 tons—has been 9 dwts. 21 grs. The loss on reduction, as shown by the assays of tailings, compares very favourably with previous years, averaging 1 dwts. 2 1/4 grs. per ton, against 2 dwts. 4 grs. per ton on the previous year; and deducting the gold obtained from the pyrites by subsequent treatment, the average loss is reduced to 0 1/2 dwts. 8 grs. per ton, or 14 1/2 per cent. of the entire gold contents of the quartz.

The Collins-street property has (conditionally on a title under the Lands Act being obtained), been sold for 4000*l.* The reserve fund at this date amounts to 6501*l.* 1*s.* 6*d.* in stock of the New Three per Cent. Annuities, as against the sum of 8252*l.* 4*s.* 3*d.* at this time last year, the difference, 1751*l.* 3*s.* 3*d.*, having been sold to meet the draft of 1600*l.* drawn by Mr. Brand on the board, to meet this company's proportion of the working expenses during the late low yields. There are no liabilities in England nor in the colony, other than the current monthly working expenses. The revenue account on Dec. 31 shows a balance to its credit of 1649*l.* 3*s.* 7*d.*, after debiting it with the balance of the twelfth dividend of 1*s.* 6*d.* per share paid on Feb. 1, which amount is carried forward. This balance of 1649*l.* 3*s.* 7*d.* does not enable the directors to recommend the payment of 1 dwts. 2 1/4 grs. per ton, but from the improvement which has taken place in the yield and the reduction in the pyrites, he is in a position shortly to declare a distribution on account of the thirteenth dividend.

The CHAIRMAN did not know that the directors had very much to say in addition to that which appeared in the report. They were, of course, sorry they were unable to declare a dividend in respect of the workings of the year; but although the 12 months' operations had not resulted favourably, the directors were glad to be able to state that the last four months had shown a decided improvement, and gave good promise of a continuance. By a telegram received half an hour since from Mr. Brand, dated Melbourne, Jan. 2, it appeared that the yield from the mine was still improving, that the two weeks of the month the yield had increased from 5 1/2 to 6 1/2 dwts., so that they were gradually working up to a better paying yield. Although they had had some unfavourable features during the year, there had been others of a favourable character. For instance, the expenditure in the colony, the reduction of which the board at home had

argued, had been decreased, and they now expected to be able to work at a profit with ore yielding 4 dwts. per ton, whereas with the former amount of expenditure they were not able to make a profit upon 5 dwts.—this was as good as giving an additional pennyweight for every ton of quartz raised. Looking at the amount of dividends paid during the past seven years, he thought the shareholders had had a good many grains of comfort, for in that period something like 87,750*l.* had been paid, being equal to 29 per cent. upon the capital or at those of nearly 13 per cent. per annum. Possessing a mine that could make such returns, and looking at the words of their resident manager that the yield of gold was gradually improving, he did not think the shareholders had any reason to look at the prospects with a gloomy eye. (Hear, hear.) It was not for the board of any company either to inflate its position or unduly depreciate it—they had given in their report all the information they possessed, and he would content himself by moving that the report and balance-sheet be received and adopted.

The motion was put and carried unanimously, without discussion.

Upon the proposition of Mr. THOMPSON, seconded by Mr. RANSFORD, the re-election of Mr. H. Moor as director was carried.

Upon the proposition of the CHAIRMAN, seconded by Mr. DELAFONTAINE, the re-election of Mr. Wingrove as director was carried.

Upon the proposition of the CHAIRMAN, seconded by Mr. NAYLOR, the re-election of Mr. Spencer Herapath as director was carried.

Messrs. Sutton and Pickins were re-elected auditors.

A vote of thanks was passed to the Chairman and directors. The CHAIRMAN, in acknowledging the vote, stated that although they were unable to declare a dividend upon the present occasion, he hoped the time was not far distant when they would be able to do so. (Hear, hear.) He then proposed that the best thanks of the shareholders be given to Mr. Brand for his services during the past year.—Mr. BEVAN seconded the proposition, and stated that those of nearly 13 per cent. per annum for any length of time were fully aware how much they were indebted to Mr. Brand for the continued prosperity of the company; and although they had been for a short time under a cloud, there was no doubt they were emerging from it.

The proposition was put and carried unanimously.

The usual courtesies to the Chairman terminated the proceedings.

## VICTORIA (LONDON) MINING COMPANY.

The ordinary general meeting of shareholders was held at the Cannon-street Terminus Hotel, on Wednesday.

Mr. HENRY MOOR in the chair.

Mr. C. H. FIELDER (the secretary) read the notice convening the meeting.

The report of the directors stated that, although the results of the year are not discouraging, the operations do not justify their recommending a dividend at present. The investments at the date of the last report represented the sum of 18,372*l.* 16*s.* 6*d.*. Since which calls have been paid on Prince of Wales shares, 12*l.*; Ballarat and Clunes, 12*l.* 10*s.*; United Abdon and Prince of Wales, 30*l.* = 54*l.* 10*s.*, making 18,927*l.* 6*s.* 6*d.*. The share in the Barford Estate Company having been realised, deduct 2195*l.* 11*s.* 6*d.*, the sum of 16,731*l.* 15*s.* represents the remaining investments in the company's books. The Barford estate having been re-sold to the original vendor, the company have received their proportion of the proceeds of the re-sale, and the amount, 1188*l.* 2*s.* 9*d.*, has been remitted here. The loss on this investment, 707*l.* 8*s.* 9*d.*, has been debited to capital account. The dividends received during the year were—From United Abdon and Prince of Wales Company, 15*l.*; Prince of Wales Company, 72*l.*; South Clunes Company, 209*l.* 10*s.* = 396*l.* 10*s.*; interest and registration fees, 39*l.* 10*s.*, making 427*l.*. The working expenses have been—in the colony, 31*l.* 4*s.* 10*d.*; in London, 12*l.* 6*s.* = 152*l.* 10*s.* 10*d.*. The company's financial position in the colony on Oct. 30, and in England on Dec. 31, was—United Bank, Melbourne, 39*l.* 13*s.*; Imperial Bank, London, on general or revenue account, 940*l.* 18*s.* 2*d.*; capital account, 3388*l.* 1*s.* 2*d.*; unclaimed dividends, 30*l.* 0*s.* 10*d.*; petty cash, 3*l.* 10*s.* 6*d.*.

The CHAIRMAN, having referred to the financial position of the company, said he might mention a fact in connection with the South Clunes Company which militated against the opinion of the shareholder who at the last meeting wished the company to be wound-up. Had that gentleman's wish been carried out they would not probably have realised more than 2000*l.* for the 4000*l.* invested in that company, while by the advice to hand lately the aggregate value of these shares was something like the sum of 18,000*l.*. That was a feature it was right the shareholders should know.—In fact, that brought up the 18,000*l.*, including the 4000*l.*, to something like 30,000*l.* and in addition to that they had been receiving dividends in the meantime. Since the date of the report the amount standing on the general account had increased from 940*l.* to 940*l.*, and the expenses in the colony had amounted to 31*l.* 4*s.* 10*d.*, and in London to 12*l.*, including secretary's salary, office rent, clerk, &c. The auditors, he might add, had agreed not to take any remuneration whatever for their services during the years 1869 and 1870. It would be in the recollection of the shareholders that at the last meeting, when the proposition was made to wind-up the company—which the directors opposed—there was a sort of implied promise that no further investments should be made until they saw what the lapse of time brought forth. But they now saw that the South Clunes Company was going on prosperously; and by the last advice from Mr. Brand, the London and Melbourne seemed likely to turn out a very good investment, and the board now proposed to employ the amount in hand in further investments. What those investments may be he could not say; but supposing there were no opposition on the part of shareholders, investments would be made. He mentioned this in order to revoke that implied promise, and the shareholders might rest perfectly satisfied that, guided by the experience of the past, the utmost care would be exercised in the selection of judicious investments. He then moved that the report and balance-sheet be received and adopted.—Mr. DELAFONTAINE seconded the proposition.

During the discussion which ensued a unanimous opinion was expressed that the capital in hand should be invested, and that it should be left entirely in the hands of the directors.

The motion adopting the report and balance-sheet was put and carried unanimously. Mr. R. H. Bland and Mr. Westby were re-elected directors, and Messrs. Wingrove and Sutton auditors.

The CHAIRMAN mentioned that Mr. Bland had also given his services for the last two years gratuitously, and proposed that a vote of thanks be passed to him for his services.—Mr. SUTTON, in seconding the proposition, said it was but right to mention that the Chairman and directors had also worked without remuneration.—The proposition was put and carried unanimously.

A vote of thanks to the Chairman and directors terminated the proceedings.

## MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

Camborne, Jan. 26.—The market is very firm, and shares in tin mines have been in good request, and upon the capitulation of Paris no doubt it will further strengthen the markets for all stocks. The principal mines dealt in are Cook's Kitchen, Tincroft, East Lovell, Carn Brea, North Koskar, North Croft, Great Wheal Vor, Wheal Margaret, Rosewall Hill and Ransom United, East Seton, Carn Camborne, and South Croft. Cook's Kitchen, 19 to 19 1/2*l.* per ton; this mine is looking well. They intend erecting more stamping machinery and a beam-engine, which will eventually greatly add to the value of the mine.—Tincroft, 49 1/2 to 50*l.* per ton. East Lovell, 31 to 32; Carn Brea, 45 to 50; a great number of shares have been bought in the county for investment during the week; and no doubt if they are bought at once they will pay well.—North Koskar: These shares are enquired after; the price is difficult to get at. The new management seems to give general satisfaction, and it is thought by some that after awhile the mine can be brought to pay; but investments should be great at first, no doubt.—North Croft, 2 1/2 to 2 3/4; these will go better also.—Great Wheal Vor shares have risen in a week from 3 1/2 to 8 1/2, owing to an improvement at Edward's shaft for tin; this is a good thing for the neighbourhood, as of late it has been looking very dull.—Wheal Margaret, 9 1/2 to 10; this is the cheapest mine on the market for investment.—Rosewall Hill, 25*l.* to 30*l.*; East Seton, 25*l.* to 30*l.*; the prospects here are encouraging.—South Frances, buyers, 30 to 31. The metal market showing firmness, especially for tin, encourages the expectation that higher prices will range for some time to come for shares in good legitimate mines.

TIN TRADE.—The following are tenders for a parcel of tin ore sold at Wheal Seton, on Tuesday, by competition, and which was bought by Messrs. Tregoning and Co.:—Messrs. Darnley and Co., 80*l.* 15*s.*; Messrs. Thos. Bolitho and Sons, 80*l.* 12*s.* 6*d.*; Messrs. Williams, Harvey, and Co., 80*l.* 17*s.* 6*d.*; Truro Company, 80*l.* 15*s.*; Messrs. Tregoning and Co., 84*l.* 10*s.*; Penpoll Company, 84*l.* 5*s.*; Rodruith Company, 85*l.* 10*s.*. A correspondent, commenting upon this sale, remarks that the advocates of the sale of tin ore in private contract have in this another instance of the benefit derived by those few mines which sell their produce by tender.

FLORENCE AND TONKIN UNITED.—A general meeting of this company was held at the mine, on Jan. 19. The opinion of several mining agents were read, and each strongly recommended the working of the Tonkin tin lode, from which profits may speedily be made. The mine bids fair to be rich in tin, copper, and lead. A call of 1*s.* per share was made. Mr. Adam Murray, of London, occupied the chair.

WEST WHEAL COIT (Tin).—In last week's Journal an error was made in the prospectus of this company, by stating the division of shares to be 1000 instead of 2000. Gentlemen wishing to secure an interest should make application as early as possible, as the first meeting will be held the beginning of next month.

SOUTH CONDURROW.—The sale of tin for this month is most unsatisfactory, and will not produce such a sum as will give the profit necessary to pay the dividend stated by so many persons as about to be declared. The severe frost that now exists has a very serious effect on the tin-dressing, and almost closes this department. The lode said to be out in the 20 fm. level west is nothing but an attempt to run up the price of shares beyond their real value.

WHEAL RUSSELL is still looking well, and making steady profits, at the rate of about 300*l.* per month. They have about 10,000*l.* worth of ore in sight, and no mine is worked more cheaply. There is plenty of water and machinery to last for years. No land carriage will be required, as the River Tamar flows through the sett. On Saturday a dividend of 600*l.*, or 1*s.* per share, will be paid.

GUNNISLAKE (Clitters) is looking well, and it may be expected that the mine will shortly be out of debt, and in a position to declare a dividend.

GEW MINE is full of activity, and will soon be in the market with 10 tons of tin, and all this is being done without any puffing whatever.

WHEAL ARTHUR, at Calstock, will be the next tin mine to be added to the Dividend List. The shares are now obtainable at a low price, and will prove a good investment.

EAST TERRAS (Tin).—The report of Captain James is inserted in another column. He gives a most satisfactory description of the property. From his high position and well-known straightforwardness much value attaches to his opinion; it corroborates that formed by Capt. William Richards, many years ago, confirmed by competent authorities since, and practically de-



# Birdseye Creek Gold Mining Company

(LIMITED).

CAPITAL £60,000, IN 15,000 SHARES OF £4 EACH.

Payment on application, 10s. per share; on allotment, 30s. per share; balance of £2 in six months afterwards.

DIRECTORS.

GEORGE BATTERS, Esq.,  
A. G. KITCHING, Esq.,  
J. T. P. PECHEY, Esq.,  
RICHARD WARD, Esq.,  
J. E. BOWE, Esq.,  
Palmerston-buildings, E.C.

Directors of the Sweetland Creek Gold Mines (Limited).

BANKERS—THE CONSOLIDATED BANK, Threadneedle-street, E.C.

SOLICITOR—ROBERT BAXTER LOWNDES, Esq., 4, Adam's-court, Old Broad-street.

BROKERS—Messrs. ST. ALPHONSE and HALLS, 75, Old Broad-street, E.C.

SECRETARY—Mr. W. J. LAVINGTON.

OFFICES,—9, UNION COURT, OLD BROAD STREET.

## ABRIDGED PROSPECTUS.

This company is formed to purchase sixteen richly auriferous gravel claims or mines worked by the hydraulic process, and certain water rights, with a valuable canal or aqueduct for supplying the requisite water.

The properties, which are at present under separate owners, and are known respectively as the "Williams" and "Neece and West" properties, are situated in Little York Township, Nevada County, California, about three miles from the Dutch Flat Station on the Pacific Railroad, 18 days' travel from England, and are in direct telegraphic communication with London.

The mines, which have been worked very successfully, are largely productive, and with a trifling outlay, and by employing the water for their development they can be made exceedingly profitable. If worked vigorously they would not be exhausted, it is estimated, for 50 years.

The aqueduct was constructed 18 years ago by the present owner, and with subsequent improvements has cost about £20,000. It conducts the water a distance of about 15 miles, and runs to its full capacity for eight months, and to a more limited extent for the remainder of the year. The water, besides supplying the portion of these claims at present worked, is the source of a large income from sales made to other mines in the neighbourhood. The importance of this part of the property can scarcely be over-estimated, as its returns alone, if the mines were left unworked, would realise a sum sufficient to pay interest upon the purchase price of the whole property.

The claims or auriferous hill deposits have a superficial area of about 90 acres, and vary from 100 to 200 feet in depth, gold being disseminated throughout.

From three of these claims—the only ones worked at present—and from the water rights, there is a yearly rent of about £10,000. With a limited outlay, three of the other claims could be worked, and the profits of the whole property, it is estimated, could be doubled. The present return is obtained from working the mines only ten hours per day, but there is no reason why operations should not be continued for 24 hours, as is usual in the district, and the returns be proportionately increased.

The mines are in three groups, as follows, and the reports set forth—  
1.—That there are seven claims on Brown's Hill, only two of which are worked, but two of the unworked claims are reported equally as rich, and operations on these could be commenced at once. From this hill £200,000 in gold has been extracted, and only one-eighth of the auriferous ground of these claims has been exhausted.

2.—Five claims on Independence Hill. Only one of these, or three united as one, are in operation. One of the dormant claims has a tunnel 500 ft. in length, almost completed, which has cost £2000, and when finished this claim could be worked profitably. From this group and contiguous claims on this hill £200,000 in gold has been obtained. Six-sevenths of the auriferous ground of these claims remain intact.

3.—Five claims at Waialupa, all of which can be very profitably worked; but they will not be required for many years.  
The amount to be paid for the properties is £53,500—£20,000 of which is taken in fully paid-up shares. There will be no preliminary expenses whatever paid by the company.

## BIRDSEYE CREEK GOLD MINING COMPANY (LIMITED).

CAPITAL £60,000, IN 15,000 SHARES OF £4 EACH.

10s. per share on deposit, 30s. on allotment, and the balance in six months.

NOTICE IS HEREBY GIVEN that the SHARE LIST will CLOSE on MONDAY, the 30th instant.

9, Union-court, Old Broad-street, Jan. 25, 1871.

By order, W. J. LAVINGTON, Secretary.

## BRAZIL.

# Morro Da Gloria Gold Mining Company (Limited).

CAPITAL £75,000, IN 75,000 SHARES OF £1 EACH.

The shareholders having the option of paying up their shares in full, and converting the same into share warrants, transferable without any transfer fee.

2s. 6d. per share on application; 7s. 6d. per share on allotment.

Share warrants, 2s. 6d. per share on application, and 17s. 6d. on allotment.

DIRECTORS.

ALEXANDER BEATTIE, Esq., M.D., Director of the Delhi and London Bank (Limited).  
GEORGE HENRY BROWN, Esq., Director Universal Life Assurance Society.  
ROWLAND COX, Esq., 3, Great Winchester-street-buildings (late of Rio de Janeiro).  
ROBERT MONACH, Esq., 16, Regent's Park-road (late of St. John del Rey Company).

(With power to add to their number.)

BANKERS—THE NATIONAL PROVINCIAL BANK OF ENGLAND, AND ITS BRANCHES

SOLICITORS—Messrs. SHEPPARD AND RILEY, 38A, Moorgate-street, E.C.

BROKERS.

LONDON.....CAWTHORN AND SCOTT, 75, Old Broad-street, E.C.  
MANCHESTER.....ROBERT MCLEWEN, Esq., Commercial-buildings, Cross-street.  
LIVERPOOL.....JOHN OKELL, 7, Castle-street.  
GLASGOW.....BLACK AND ROBSON, 14, Princes-street.  
EDINBURGH.....H. W. HISLOP, 10, George-street.

TEMPORARY OFFICES,—38A, MOORGATE STREET, LONDON, E.C.

## ABRIDGED PROSPECTUS.

The property is within five and six miles of that of the St. John del Rey Mining Company.

Reports by the captain in charge of the St. John del Rey Company, of Mr. H. Dumont, C.E., Capt. Roberts, and Mr. W. H. Richards, late of the St. John del Rey Company, establish this property as being most valuable.

There are six auriferous formations on this property—two can be traced more than a quarter of a mile on the surface; the principal of which are of a similar nature to the Morro Velho Mine of the St. John del Rey Company, from which £1,000,000 sterling has been made.

The gold is very pure, being above 23 carats fine, worth nearly 9s. per ounce.

The estate is very large, and contains abundance of timber, and large and excellent pasture grounds.

Date of contract, 26th November, 1870. Names of the parties to the contract, Comendador Francisco de Paula Santos of the one part, and Henry William Mathias, on the part of the company, of the other part.

Copies of the agreement, and Articles of Association, can be seen at the offices of the solicitors to the company.

Prospectuses and forms of application for shares may be obtained at the offices of the company, and the brokers, bankers, and solicitors of the company; and if no allotment be made the deposits will be returned in full.

level will not be cleared till to-morrow or the following day, as the water being quick we have but little opportunity to haul stuff. We shall labour under this difficulty until we have the pumps. The stuff brought down with the water contained a great deal of blende and, in fact, was good saving work for this ore. The ground in the cross-cut is very hard—harder than any we have had. We have driven 8 fms. from the shaft.—Marlene: The lode in the north-east adit level has not altered since my last.—Adele: The adit level, going east, is being driven pretty rapidly through a fair grauwacke.

[For remainder of Foreign Mines, see to-day's Supplement.]

## WATSON BROTHERS,

MINING AGENTS, STOCK AND SHARE DEALERS, &c.,  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

**SATURDAY.**—Market active. Great Voss advanced to 9, buyers, in consequence of a good improvement. East Grenville, Grenville, Tincroft, Rosewall Hill, Carn Brea, East Lovell, Marke Valley, Taquaril, Agar, and South Condurrow, all after, and firm at quotations. Great Vor, 8½ to 10; East Grenville, 3½ to 3½; Grenville, 4 to 4½; Tincroft, 49 to 51; Rosewall Hill, 30s. to 35s.; Carn Brea, 40 to 50; East Lovell, 32 to 33; Marke Valley, 7 to 7½; Taquaril, 4s. to 4s. 6d.; Agar, 2 to 2½; South Condurrow, 4½ to 5; New Beldon, 15s. to 20s.; Great Laxey, 17 to 18; Kitty (St. Agnes), 9 to 9½; Chontale, 10s. to 15s.; Don Pedro, 2 to 2½.

**MONDAY.**—Market moderately active for Prince of Wales, Grenville, East Grenville, Taquaril, Carn Brea, East Lovell, New Lovell, Don Pedro, and Great Laxey. Prince of Wales, 37s. to 40s.; Grenville, 4 to 4½; East Grenville, 3½ to 3½; Taquaril, 4s. to 4s. 6d.; Carn Brea, 40 to 50; East Lovell, 31 to 32; New Lovell, 17 to 20; Don Pedro, 2½ to 3½; Great Laxey, 17 to 18; West Chiverton, 29½ to 30; East Caradon, 5 to 5½; Great Vor, 8½ to 9; Rosewall Hill, 27s. 6d. to 30s.; Tincroft, 49 to 51; Tankerville, 13 to 13½; West Maria, 26s. to 28s.

**TUESDAY.**—There is a good demand to-day for Prince of Wales, Grenville, East Grenville, Crebhor, Carn Brea, Great Vor, and Great Laxey, Taquaril weaker. Prince of Wales, 37s. to 39s.; Grenville, 4 to 4½; East Grenville, 3½ to 3½; Crebhor, 12s. 6d. to 15s.; Carn Brea, 40 to 50; Great Vor, 8½ to 9; Great Laxey, 17 to 18; Cook's Kitchen, 18½ to 19½; Drake Walls, 28s. to 29s.; East Lovell, 31 to 32; Marke Valley, 7 to 7½; New Beldon, 15s. to 17s. 6d.; North Croft, 2 to 2½; Roman Road, 9½ to 10½; South Condurrow, 4½ to 4½; Tankerville, 13 to 13½; Kitty (St. Agnes), 9 to 9½; Margaret, 8½ to 9; Uny, 2½ to 3½; Taquaril, 4s. to 4s. 6d.; Don Pedro, 2½ to 2½; Eberhardt, 14 to 14½.

**WEDNESDAY.**—Market very active for Prince of Wales, Great Laxey, Great Vor, West Maria, and Crebhor, Taquaril and Don Pedro flatter. Prince of Wales, 37s. 6d. to 40s.; Great Laxey, 17 to 18; Great Vor, 8½ to 9; West Maria, 26s. to 28s.; Crebhor, 10s. to 15s.; Taquaril, 37s. 6d. to 40s.; Don Pedro, 2½ to 2½; Providence, 37 to 38; East Caradon, 5 to 5½; East Lovell, 31 to 32; Tincroft, 49 to 51; West Chiverton, 29½ to 30.

**THURSDAY.**—Market rather quiet to-day. Taquaril opened buyers at 44s., advanced to 46s., but close a shade weaker. Prince of Wales not quite so firm. Taquaril, 43s. to 45s.; Prince of Wales, 36s. to 38s.; East Lovell, 32 to 33; West Chiverton, 49 to 50; South Condurrow, 4½ to 5; Grenville, 3½ to 4; East Grenville, 3 to 3½; Great Vor, 8½ to 9; Rosewall Hill, 27s. 6d. to 30s.; Marke Valley, 6½ to 7½; Great Laxey, 17½ to 17½; South Frances, 29 to 30.

**FRIDAY.**—Market again quiet. Dealers engaged with the settlement. Tincroft, 47 to 48; Cook's Kitchen, 17 to 18; Carn Brea, 40 to 45; South Condurrow, 4½ to 4½; Grenville, 3½ to 4½; Providence, 37 to 38; Taquaril, 45s. to 47s.; Prince of Wales, 36s. to 37s. 6d.; East Lovell, 32s. to 33s.; Van, 54 to 56; West Chiverton, 49 to 50; Don Pedro, 2½ to 2½; Perran Wheel Virgin, 1½ to 1½.

## Mining Correspondence.

### BRITISH MINES.

**ABERDAUNANT.**—Henry Francis: The large boulders of lead ore found in the Crowllym portion of the sett are evidently from the back of the lode of great richness, and active operations should be carried on to discover it; I cannot too strongly recommend this being done. At the eastern extremity of Aberdaunant grant, on the great Van lode, and adjoining the Van Conso Mine, a deep adit level has been driven a considerable distance into the hill on the Crookan part of the lode; and I am decidedly of opinion, from the great width of the lode, and from the back of the lode on surface being charged with fine stones of lead ore for a considerable distance up the hill, that good discoveries will be made in this level on the north or footwall of the lode—such, in fact, has been the case in the western end of the hill at Aberdaunant on the same lode, and I cannot discover any reason why the same results will not be met with here. In following the back of the great Van lode westward from the deep adit at eastern base of the hill, Aberdaunant Mine is met with, and for a distance of several hundred fathoms between these two points the lode is of such strength and character that it is easily discernible by the undulation of the back of the hill from one point to another. At Aberdaunant Mine rich and important discoveries have been made in the No. 2 adit level east; this level has gone through further east a most important discovery of lead ore has been made on the north or footwall, worth now 4 tons of ore per fathom for the width of lode taken down. In the Aberdaunant deep adit east we have been cross-cutting north, with a view to find the ore gone down from No. 2 adit, and when discovered it will add 18 fms. of rich backs to those above No. 2 adit. There is no lode in the end of deep adit east at present; it has, in my opinion, been thrown to the north, at least the slide in the end and appears to indicate as much; but I have no doubt, when found, it will prove a favourable character for ore. This level, together with the deep adit west from eastern base of hill, should be carried on with vigour. An engine-shaft will at some future period be required, but it is premature at present to say where it should be sunk; and in the meantime the winze sunk under Aberdaunant deep adit level east (in which I am told there is a fine course of rich ore) should be cleared and immediately dispatched. We have several tons of lead ore broken and ready for dressing, as well as about 4 tons marketable in the bin. On 30th inst. a wheel, together with crushing-mill, jigging-butches, buddies, trunks, &c., over all of which we have erected good and durable sheds, are in perfect order.

—H. Francis, Jan. 25: The lode in No. 2 adit east continues to look well. The stopes in the back of this level are much the same. The lode driving through with Rule's cross-cut, north from the deep adit level, is just of the same character as the lode in the No. 2 adit level. Our dressing operations have been partially retarded by frost, notwithstanding we have about 5 tons of clean ore ready for market, which with favourable weather we could soon increase to 10 tons.

**BEDFORD UNITED.**—J. Phillips, Jan. 26: There is no change to notice to-day. We shall take down the lode in the different levels, and give a full report next week.

**BLUE HILLS.**—S. Bennetts, A. Gripe, Jan. 21: The ground in the shaft continues much the same, and the lode seems to be gradually becoming better defined, and contains some tin-stuff. In the 6s. east of Lecher's, the lode is 2 ft. wide, and worth 10½ per fm.; west at the same level it is unproductive. On the Wheel Betsy lode the 13s. east of Polycar, is worth 1½ per fm. The stopes above this level is worth 7½, and that above the same level, west of gossan, 8½ per fathom. There is but little change in the various tributes.

**BRYN ROYALTON CONSOLS.**—T. Parkyn, Jan. 26: We are now engaged in putting up a rise from the back of the adit, or tunnel, to the surface. At this point I shall have a shaft, and in working the adit, the engine-shaft quarrying, commencing from the surface, I shall be in a position to fill the iron wagons from the bottom of the shaft. In a short space of time I shall have two or three of these shafts, so that the stamps will be supplied with tin-stuff, and you will see that the stamps can be supplied at a very cheap rate. We have driven some considerable distance in the elvan, containing good work for tin, and of this quality you have immense quantities; the elvan is 12 fms. wide, and is laid open high and dry above water, as I stated to you at the onset. An adit level was driven, intersecting the elvan 25 fms. from the surface, and is letting out a large stream of water. The engine-house is being built so that this stream of water is available for the use of the engine, and also the dressing-floors. This is a most important feature—you having a full supply of water all the year round, without pumping. You will observe that this mine can be worked as open quarrying, and the tin-stuff trammed into the stamps, no shafts to sink or level to drive, as in mines generally. In addition to this large elvan course, I have discovered several other lodes, of great value for tin. The lode is great Royalton lode, called King's lode, now worth 20½ per fathom in that mine in the 22 fm. level; this lode runs through your sett for half a mile in length. There is another lode, called the Grey lode, which runs completely through the sett. These lodes can be worked at a depth of 25 fms., without the aid of any machinery. These and the other lodes can be quarried and trammed into the stamps like the elvan. The 48 heads of stamps are quite ready, and the tramroad laid down the east side of the engine-house to 24 heads, and the west side will be instantly laid down to the other 24 heads, and the stamps will be employed, when good returns of tin will be at once made. I beg also to state that the dressing-floors are all laid out in readiness for the dressing of the tin. I have no hesitation in saying that the Bryn Royalton Consols is a most valuable property; indeed, the facilities for working being so good, large profits will be realised.

**CAE GYNON.**—T. Hodge, Jan. 21: The engine-shaft is below the 50 about 5½ fathoms, the ground in which is moderate; there is more water coming out, which rather retards our progress; sinking by six men. The 50 to drive west, by six men, at 8½ per fathom, the lode in which is looking exceedingly promising, yielding coarse dressing work. I hope to value this end in my next. The 40 to drive west, by four men, at 7½ per fathom; the lode is disordered by a cross branch. The stopes in the bottom of the 40, east of No. 1 winze, by six men, at 27 per fathom; the lode will yield 12 cwt. of lead per fathom. The stopes in the back of the 40, west, by six men, at 3½ per fathom; the lode will yield 12 cwt. of lead per fathom. The 30 to drive west, by two men, at 4½ per fathom; the lode is yielding some good stones of lead and blende—a promising lode. The 20 to drive east, by two men, at 6½ per fathom; I intend to drive this to reach the junction of the north and south lodes, which I calculate is about 10 fms.; it is rather an interesting point to see, as the north lode has not been seen in this mine to the east of the junction. To stop the bottom of the 20 west, by two men, at 2½ per fathom; I cannot see enough of the lode to value it now, but we are going to take down a piece of ground, at 4½ per fathom, and will report upon it in my next. All the filling and landing in two men, for one month, at 6½ per fathom, the takers to pay all cost.—Tribute: A pitch in the back of the 20, west of blende winze, on the south lode, by two men, to have 28s. per ton for blende, and 4½ per ton for lead, clear of dressing. A pitch east of the same winze, to two men, at the same tribute. We have put 3 tons of lead to pile this week, and hope to dress another 3 tons next week. We have not drawn any blende for this month, but I calculate we have 10 to 12 tons underground. On the whole, I consider our prospects are more cheering.

**CALDECK FELS.**—P. Hawke, R. Trevarthen, T. Lamb, Jan. 20: The 20 fathom level east, on the north lode, at junction shaft, is worth for lead 17 cwt. per fathom, and indicates greater results. The end west in the 20, on the north lode, at said shaft, contains copper and lead, but not sufficient to value. We are yet 5 or 6 fms. in arrears of the run of lead gone down in the 10 fm. level. There is every indication of a decided improvement immediately south-east in this level, on the caunter lode, the 10 fm. level west, at the junction shaft, is worth for lead and copper 15 cwt. per fathom. We continue to prosecute the cross-cut north in the deep adit, near to the junction shaft, on the course of a strong porous branch, chiefly of quartz, spots of copper, gossan, and iron; and we expect to intersect the caunter, near lode, the great copper, and the Silverhill lodes. Although this branch is charged more or less with rich copper, we do not expect it to increase in value in arrears of the lodes in question, but it is without doubt a strong feeder to the grades yet in advance of the drive. The north and newly discovered lode west in the deep adit have hitherto kept together since the point of junction was passed, but we have now reached the point where these lodes are to separate, and the influence is such, that both lodes have entirely disappeared, leaving no trace whatever of their whereabouts. We shall have to rise the adit before deciding as to the direction in which we are to proceed for their recovery. The new lode east of point of junction with the north lode, in the deep adit, is worth for lead 15 cwt. per fm. The rise in the back of the deep adit, on new lode, is worth for lead and copper 4 cwt. per fathom. We have observed for some weeks a change of strata in the hanging wall in the 80 west, on the north lode, which indicates something of greater value than the spile of lode which we have had for some time past, and we commenced to prove it by cutting into the hanging wall, which has led to the discovery of a limb of the lode, which is worth for lead 15 cwt. per fm. The prospect throughout in the tribute workings is satisfactory. In consequence of the severe weather we have not been able to clean any lead for the market since our last sampling, on Dec. 25. We have, however, succeeded in driving about 15 tons of copper. We have 22 pitches working, by 54 men, at average tribute of 5s. 11d. in 11 sterling.—P.S. We are pleased to report since the above was written that an important improvement has taken place, as we expected, in the 20, at junction shaft, on caunter lode, worth for lead ore over 20 cwt. per fathom.

**CAPE CORNWALL.**—R. Pryor, J. Davey, Jan. 24: In the 100 end, driving east of the cross-cut, the lode is composed of peach and muddle; there is also a leader of muddle in the north part of the level running parallel with the lode. In the 100 cross-cut there is scarcely any alteration to notice since the last report.

**CAPE BANHAGLOG.**—J. Kitto, Jan. 26: Since my last report there has been but little change in the mine worthy of remark. We are still continuing to drive east on the course of the lode, which has increased in size to 4 ft. wide, and I expect within another fortnight we shall reach the run of ore ground we passed through in the adit and 12 fm. levels, when I have no doubt of being able to report a decided improvement. There is nothing new in any other part.

**CAPPAUGH.**—W. Thomas, Jan. 23: During the last few days the lode in the winze sinking under the bottom level has not been taken down, but as far as can be seen it is still improving, and at the skip-shaft there is also a promising lode, consisting of quartz, carbonate of lime, and stones of ore. Since last report we have put down ladders from the 54 to the 61, west of skip-shaft, and traced the slide or cross-course from the 71 up to the 64, which appears to have made a great deposit of ore about this place and in the levels above; and as there is a whole ground in this direction, I am of opinion that we shall find good stopes of ore. The 84 and 91 have not been driven far enough west to intersect the cross-course, which underlies west, and has caused a very favourable change in the character of the ground; it will also, no doubt, cause the lode to become productive in the deeper levels. There is no alteration in other places at work, but when we intersect the north lode in the 24 we shall push on the cross-cut north in the 41, which is already driven to within a short distance of the lode, and also cross-cut from the deeper levels. We are getting on as fast as possible with the dressing operations.

**CEFN CON-SOLES.**—Charles Mansbridge, E. Evans, Jan. 26: We have six men now working in the 9 fm. level, and getting very good lead in the west driving. We have sunk a sump 2 fms. deep in the north driving, and are driving out east from the bottom of the sump towards the north and south lode. There are very nice stones of lead in bottom of the sump, and also in the east driving. The men then were taken out of the 9 fm. level have been employed on surface in cleaning washing-floors, &c., so we shall commence washing our stock of lead (about 30 tons) as soon as the frost goes off. The water has sunk about 4 ft. in

## FOREIGN MINES.

**TUOLUMNE (Gold).**—E. S. Hast, Dec. 19: During the last few days the men employed in stopping the quartz in the south drift of the lowest level have met with some rich-looking rock, and we are anticipating the pleasure of sending you word of a good crushing by the end of the month. We anticipate our weekly crushing to average 100 tons. The repairs in the mill have been somewhat delayed owing to some heavy rains during the first week in the month, which made the roads so bad that it was impossible to get the timber here till the rains ceased and the roads improved. The cost of this repair, I am glad to inform you, will not be so heavy as we at first anticipated, as all we require now is the mortar-block and foundation timbers. Since the 10th the weather has changed to sharp frost, and the mountains are all covered with snow. We are fortunate in getting all our timbers down for the mill before the snow commenced.

**PESTARENA.**—T. Roberts, J. Mitchell, Jan. 17: We melted yesterday, and consigned to Signor Carlo Menozzi, on account of the present month, 4100 lbs. of gold obtained by a small number of mills at Pestarena, and that by the mills in Piedimulera establishment up to the 16th, weighing together 5107 grammes, equal to 164 ozs. 5 dwts. 11 grs., from 230 tons of ore. The cold weather continues to be very severe; so far this month we have only been able to treat with the small mills in the Marmazza Valley 3 tons of ore, and not any ore at Battiglio establishment; according to present appearance we are about to have a change for the better. The cartage of ore to Piedimulera establishment has not been impeded for several days past. For the remainder part of this month we hope to be able to do better than we have done in the first part of it.

—Thos. R. Berts, Jan. 21: The snowstorm mentioned in my note of the 19th is over, and the past two days we have been with a great force of men clearing snow from the roads from Val Toppa Mine. We hope to be able to resume sledging and carting ore to the establishment on Monday, the 23rd. The snow at the Piedimulera establishment is 15 in. deep, and at the mine 30 in. deep. We have been obliged to suspend for the present the picking of the ore at the mine; from this, and our not being able to bring a better class of ore from the mines, our gold production for this month will not be as much as last month, having had to treat a poorer class of ore lying at the establishment. I will write again on the 25th.

**RHINE.**—J. Garland, Jan. 23: Schmelzer: On the 14th inst. a large quantity of water from the old workings broke in at the back of the north level, on the Tor lode, bringing down with it a great deal of lode-stuff in a fine state, and blocking up the levels. Driving was necessarily suspended for a few days. We were enabled to resume the driving of the cross-cut on the 18th, but the north



The bottom of this level has not been worked for the past twenty or thirty years.







The lode in the stope west of shaft is worth 12L per fathom. The lode in the adit level is 6 ft. wide, producing good stones of ore. We shall sample on Friday 160 tons of copper ore.

**WHEAL SPARNON.**—W. Tregay, Jan. 21: The north lode in adit east end produces a little tin in the gossan, and the ground is favourable. We are still securing the east adit.

**WHEAL UNY.**—W. Rich, M. Rogers, S. Coade, Jun., Jan. 21: The 160, east of engine-shaft, is worth 6L per fathom. In the same level west the men are engaged cutting trip-plat. In the 150 west the lode is worth 7L per fathom. The rise in the back of the 150 east is worth 8L per fathom, and looks likely to improve. The 140, east of Gooding's, is worth 8L per fathom. The stope in the back of this level, west of shaft, is worth 25L per fathom. The rise in the back of the 140, west of Cock's shaft, is yielding saving work for tin. The rise in the back of the 130, west of this shaft, is worth 8L per fathom. The 130, east of Gooding's, is worth 20L per fathom. The 120 east is worth 10L per fathom. The 100 east is worth 8L per fathom. The rise in the back of the 80 is worth 10L per fathom. The 60 east is worth 10L per fathom. The 45 east is worth 20L per fathom. We have put the wire-rope to work, which is a great improvement, when compared with heavy chains, for hauling purposes.

**ROMAN GRAVELS.**—The reports of Captain Williams, manager of Van, and Capt. Waters, manager of Tankerville, will be issued in a few days. Capt. Williams states that it is his third visit to the mine, and minutely describes every point of operation. He states that the mine in its present condition can return 100 tons of lead per month for six months without increasing the costs, and that in the meantime the different points of operation will have been communicated, and the ground opened, when the returns can be increased to 150 tons per month. If (says Capt. Williams) the explorations turn out as they indicate at present the day is not distant when Roman Gravel will send to market 200 tons of lead per month. Capt. Waters more than confirms all Capt. Williams's computations, and in an exhaustive report states that the present returns of 100 tons per month may be maintained for six months without working the mine too fast—that is, working the ore before it is properly cut up by winzes, or putting on additional stopes. By that time certain operations (which are fully explained) will have been completed, which induces Capt. Waters to feel certain that rich courses of lead will be opened up that must add very largely to the monthly returns—to 150 tons, and at the end of 12 months to 200 tons. This can be done without assistance from the south or all run of ore, and without any addition to the present machinery or plant. By an expenditure of 3500L, the returns can be increased to 300 tons per month. It is not much to say that these two comprehensive reports are equalled only by those well-remembered documents issued upon the Van Mine some twelve months since. More copious extracts will be given in next week's Journal.

**REPERRY TIN AND COPPER MINE.**—During the present month this mine has been very gradually improving, until Thursday, Jan. 19, when the lode in the 25 fathom level east suddenly improved very much, and is now still proving a strong valuable lode; the other ends are also showing good work. On Monday a conference was held by some mining captains, the result of which will appear in the *Mining Journal* next week, as also the assays of the samples taken from the different ends. It is confidently anticipated that a good profit will be shown on the next month's working, as everything will be completed by that time. The small number of shares into which the mine is divided renders it probable that a substantial dividend may be declared in a short time. It is evident that with the present price of tin, that if a mine is worth anything, as this is generally considered to be, it must be a first-class investment at the price.

**EAST TERRAS.**—It is stated that the lease of this mine, from the Hon. G. M. Fortescue, the sole lord, is at the office of the company, in Gresham House; and that the shares will be issued next week. The mine is to be conducted on the limited liability principle, and is said to be exceedingly valuable. The manager is Captain James, the superintendent of the adjoining mines, whose report will be found in another column of this day's Journal.

**WHEALS HARMONY AND MONTAGUE.**—The former prosperity and celebrity of the Redruth district appears about to return. A fine benefit for this *par excellence* mining town will be the re-working of these neglected old copper mines in so close proximity to the place; these mines in former days gave employment to hundreds of hands, and yielded profits reckoned by hundreds of thousands of pounds. Like all the new great tin mines in the locality, copper at the period referred to was the sole object of the adventurer—in fact, so much was tin ore in lodes about Redruth neglected, that the miner seldom recognised or valued tin in the stone if he saw it. Well informed parties had often endeavoured to persuade the agents that tin could be profitably wrought, but at that time prejudice would admit no other sources of tin could be remunerative save tin streams (now exhausted), the Wendron, St. Just, St. Agnes, or St. Austell districts; most of these, too, have been so extensively worked as to be very expensive to continue except in new undertakings. It has been proved beyond all doubt, in fact it has long been known, that the backs of the great copper lodes in the Redruth district invariably carry tin in considerable quantities, as well as having positive tin lodes. In the days referred to the demand for tin was as nothing in comparison with that existing now, the price for black tin averaging from 35L to 45L per ton, whereas it is now from 75L to 80L. Public opinion, frequently a good criterion, is decidedly in favour of this property as being certain to repay the outlay in a short time, and to add one more to the many permanent dividend mines in this and the neighbouring parishes of Illogan and Camborne. The publications of the prospectus, and the knowledge that these mines are about to be resuscitated, have created considerable pleasure at Redruth.

**TAGUARIL.**—A telegram, in anticipation of the Oneida, couched in ambiguous language, led to large speculative sales of these shares, and being represented in the most unjustifiable light frightened many timid holders into selling, the fall being fully 10s. per share. On Thursday a telegram, dated a fortnight later, arrived, bringing the most satisfactory accounts; the stamps hitherto working on the debris had been some days employed on the regular vein stuff, and yielded well, 1200 ozs. of gold had been obtained up to the end of last month. Further, the bottom of the old mine was drained, and operations are being vigorously prosecuted on the several rich shoots of gold already seen, while further important discoveries may any day be made. Altogether the prospects of large and immediate returns of gold are of a high order. By the February gold troop a remittance of gold will be made, and thus set aside all question as to the richness of the Taguaril Mine.

**EBERHARDT AND AURORA.**—Although the winter has set in unusually early and severe, the extensive operations at these mines are progressing satisfactorily. The model mills, described in the Journal some few weeks since, were to have gone to work on Jan. 25, and in the meantime the small mill has been yielding profits sufficient to meet the whole of the expenditure incurred in placing the several properties in a condition to fully and permanently supply the new mills with ore. At the date of the last advices the wire-way was to have gone to work in the course of a few days. The Ward Beecher Mine, which the Eberhardt Company has acquired for 1000 of its fully paid-up shares, is described by competent authorities to be of equal value to either Eberhardt or Aurora, for each of which the sum of 75,000L was paid. It cannot fail to be satisfactory to the shareholders to learn that the average yield of the ore now being treated by the small mill is equal to 2000 of silver per ton, which is equal to five times the return computed at the time the purchase was made.

**"INVESTMENTS AND SPECULATIONS FOR 1871,"** by Mr. CHARLES THOMAS.—Some time since favourable attention was directed to the first edition of this pamphlet. From a second edition, which is advertised to appear to-day, it will be seen that the selection was made with judgment, and of utility to those who availed themselves of it, none of the shares recommended either as investments or speculation being now at a lower market price than at the time the pamphlet was published, while in not a few instances a considerable advance has taken place. Mr. Thomas appears to have no intention of varying the selection made in December, and adds but one mine to the list.

**"PROFITABLE INVESTMENT OF CAPITAL IN BRITISH AND FOREIGN MINES,"** is the title of a pamphlet just issued by Mr. F. W. MANSSELL. A judicious selection appears to have been made, and the bases upon which the recommendations are made are clearly indicated. The pamphlet is worthy perusal by investors.

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## The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JAN. 27, 1871.

COPPER.				IRON.			
Best selected, p. ton	£ s. d.	Per ton.		Bars Welsh, in London	7 2	6 7	10 0
Tough cake and tile	75 0 0			Ditto, to arrive	7 0	0	—
Sheeting and sheets	74 0 0	76 0 0		Nail rods, in London	7 15	0	8 0
Bolts	75 0 0	76 0 0		Do., Stafford	6 10	0	0
Bottoms	76 0 0	77 0 0		Bars, ditto	8 2	6	2 6
Old	62 0 0			Hoops, ditto	8 18	0	5 0
Burra Burra	74 0 0	75 0 0		Bars, at works	7 15	0	8 0
Wire, per lb.	0 10 0			Hoops, ditto	8 2	6	5 0
Tubes	0 10 0	10 0 0		Sheets, single	9 10	0	11 0
BRASS.				Pig No. 1, in Wales	3 15	0	4 0
Sheets	73d.-8d.			Refined metal, ditto	4 0	0	5 0
Wire	74d.-7½d.			Bars, common ditto	6 0	0	—
Tubes	9½d.-10½d.			Do., march, Tynor Tees	6 10	0	—
Yellow Metal Sheathing	6½d.-7d.			Do., railway, in Wales	6 0	0	5 0
Sheets	6½d.-6¾d.			Do., Swed. in London	10 6	—	—
SPELTER.				To arrive	10 6	—	—
Foreign on the spot	£17 10	0-17 15 0		Pig No. 1, in Clyde	2 12	0	3 0
to arrive	—	—		Do., L.O.B. Tynor Tees	2 0	0	—
ZINC.				Do., Nos. 3, 4, L.O.B. do.	2 6	2	7 0
In sheets	£22 10	0-23 0 0		Railway chairs	5 17	0	6 0
QUICKSILVER (p. bottle)	12 0 0			spikes	11 0	0	12 0
TIN.				Indian Charcoal Pigs,	6 5	0	6 10 0
English blocks	£135 0 0			In London, p. ton	6 5	0	6 10 0
Do., bars (in bris.)	136 0 0			STEEL.			
Do., refined	139 0 0			Swed., in kegs (rolled)	12 10	0	13 0 0
Banca	133 0 0	134 0 0		Do., (hammered)	13 0	0	14 0 0
Straits	133 0 0			Ditto, in faggots	15 0 0		—
TIN-PLATES.				English, spring	17 0 0		—
Per box.				LEAD.			
IC Charcoal, 1st qua.	1 6	8	1 8	English Pig, com.	18 0	0	—
IX Ditto, 1st quality	1 12	6	1 14	Ditto, L.B.	18 0	0	—
IC Ditto, 2d quality	1 5	6	1 6	Ditto, W.	18 0	0	—
IX Ditto, 2d quality	1 11	6	1 12	Ditto, sheet	18 0	0	—
IC Coke	3 0	1	4 0	Ditto, red lead	20 10	0	—
IX Ditto	1 9	0	1 10	Ditto, white	28 0	0	30 0 0
Canada plates, p. ton	13 10	0	14 10	Ditto, patent shot	21 0	0	—
Ditto, at works	13 0	0	14 0	Spanish	17 10	0	17 15 0

REMARKS.—We note with satisfaction indications of vitality in various branches of the Metal Trade, which serve to prove not only the healthy condition of our markets, but from the sensitiveness observable, we may, with some increased assurance, believe that all that is wanted is a restoration of confidence, when we may expect a brisk demand, and a free circulation of business, such as has not been experienced for a long time past.

**COPPER.**—There has been during the past week more enquiry for this metal, and transactions have assumed an importance which has not been manifested for a considerable time. Reports from the East continue satisfactory. Stocks are diminishing, and fractionally higher prices are obtainable. Manufactured copper is still to be bought at a small advance upon the lowest point touched within a century, but other varieties exhibit great firmness at enhanced values. The feeling generally is that there is no prospect of a decline in the market, while the probability is that a combination of circumstances may very shortly occur, which will result in a material advance upon present prices. About 4000 tons of ore and regulus have changed hands at 12s. 9d. to 13s.; Chili bars, to arrive, 66L 5s. to 66L 10s.; Lota ingots, 69L; Wallaroo, 73L 10s. to 74L; tough ingots, 72L to 73L, closing firm at the last quotation; manufactured, nominally, 74L to 75L. Charters from Chili, for the last fortnight in December, are announced at 1000 tons only, consisting of 400 tons of regulus and ore, and 600 tons of bars and ingots.

**IRON.**—Until within the last few days the market for almost all descriptions of iron has continued dull, but within the last day or two a more lively feeling has prevailed, and sellers take a more hopeful view of the future course of our market. According to the comparative exports to the Indian markets, there seems great room for a considerable increase in the demand; the principal drawback existing at the present moment is the unfavourable rate of exchange, but it is considered by many that a recovery will take place ere long. Staffordshire bars amongst makers generally are selling at a reduction of 2s. 6d. per ton upon late quotations. Swedish bars are in good request, and sales have been made for arrival at 10L 2s. 6d., Indian assortment. Scotch pigs have scarcely undergone any change, the vouchers not amounting to more than a penny or so per ton; the cash price is 50s. 6d. Shipments continue to decrease, and stocks slightly increase; the severity of the weather greatly contributes to retard the shipping trade, and consequently a greater impetus will be given to the spring demand.

**LEAD.**—There is no movement as yet to chronicle in respect to this market. The demand is quiet, with a slight easiness in prices, and sellers would not be indisposed to meet buyers' limits, but as there is nothing of importance transpiring quotations remain nominally without change.

**SPELTER.**—A large business is reported this week, and there is more speculative feeling exhibited than for some time past. Silician has been sold at prices varying from 17L 12s. 6d. to 17L 15s., and 17L 5s. to 17L 10s. has been given for Rhenish and Belgian.

**TIN.**—The market has not been quite so strong during the week, and the English smelters have to-day announced a reduction of 2L per ton. Foreign is held less strongly in consequence of the before-mentioned alteration that has been made in English.

**TIN PLATES.**—The position of the market is unchanged.

**STEEL.**—Swedish continues neglected. QUICKSILVER as before.

**IRON TRADE.**—(Griffiths' Weekly Report).—The conflicting rumours of capitulation and peace which have been so rife this week have created some excitement in the City, although we cannot say that trade of any kind has been improved by them. All we know for certain up to this evening is that Jules Favre is at Versailles, and important news is expected every hour by wire. This abnormal state of things causes the greatest stagnation in business, and the iron trade suffers with all the great staple trades of the country. All new enterprises stand still, waiting the momentous issue at this moment in the balance at Versailles. We shall never soon know whether the fall of Paris will be the signal for events of still greater importance in the same direction, or whether Gambetta will still continue to persevere in his spirited efforts to galvanize the masses in the provinces to further feats of heroism in their patriotic resistance to the encroachments of the hated stranger, whose iron hoof has long trodden down their fields and vineyards. It is a remarkable fact, in corroboration of our views, that the stagnation to business on the Stock Exchange during the last 20 days has been unequalled for 20 years, scarcely any business having been transacted in any department, although stocks generally are at tempting prices. We cannot thus be surprised that the iron market remains quiet and inanimate. As we stated last week, the Black Sea Company has opened well, and continues to progress favourably, and we expect good orders from Russia for rails as soon as this question is settled.—Cornhill, London, Jan. 28.

**COPPER AND TIN.**—Messrs. Vivian, Younger, and Bond.—Some very large operations have been entered into during the past week, and a general advance of 20s. to 40s. a ton has taken place in values. Upwards of 1000 tons of bars have been taken at from 64L 5s. to 65L cash, and 65L 10s. to 66L 10s. with a prompt. Also 3700 tons of Chili regulus at 12s. 9d., and 1000 tons at 13s. per unit. For English tough 71L for common and 72L for best brands has been freely paid, and best selected has commanded a ready sale at 73L. Considerable transactions, amounting in all to about 500 tons of Wallaroo, have taken place at 72L 10s. to 73L cash, and 73L 5s. with a slightly extended prompt. At last we are able to report an improvement in the enquiry for India sheets. Orders have been booked at 72L and 73L. For other places the demand for manufactured has been highly satisfactory, so that it is to be hoped this branch of the trade will show more life than during the past year. On Wednesday the cablegram in advance of the Chili mail of Jan. 2 came to hand, advising charters for the fortnight of 1000 tons fine copper—400 tons in bars and ingots, and 600 tons fine in ores and regulus. In foreign tin on the spot business is daily reported at 13s. cash, both Banca and Straits. Very extensive transactions for arrival have been done at from 131s. to 133s. The quantity of Straits shipping per steamer having exceeded the ordinary anticipations, prices for such lots are not easily sustained. The demand for English is exceedingly small, the prices being relatively very high.

**COPPER.**—Messrs. James and Shakspeare.—About 2800 tons of ore and regulus were purchased by one of the leading Swansea smelters at 12s. 9d., and this giving a firmer tone to the market, importers asked an advance of 3d. per unit, which they obtained yesterday for 1000 tons. In slab there have been several transactions at 64L to 65L for good ordinary brands, 64L 10s. to 65L for special marks, whilst for arrival or long prompt 10s. to 30s. extra was paid, according to the extra time required; buyers throughout appeared more willing to purchase than holders were inclined to sell, and as the bulk of the stock is not on the market it has been difficult to obtain any important quantity at the quotations of the day. Ingots have sold pretty freely at 69L for Lota, 71L per ton for double refined Urmeneta, and of the former the small quantity remaining is held in second hands. On the 26th inst. telegrams came to hand from Valparaiso advising charters of 600 tons bars and ingots, 400 tons pure in ores and regulus, for the last fortnight in 1870; during the corresponding period 1869 the total charters were equal to 2500 tons pure. The demand for Australian has been tolerably good, but business is impeded

through the severity of the weather preventing shipments to the northern continental ports, to which the major portions of the exports are consigned. Nevertheless we note sales of Wallaroo cake at 72L 15s. to 73L 5s., cash and slightly extended prompt, and of ingots of that brand at 73L 10s. per ton. Banca is nearly all held by one importer, and the small quantity sold has, therefore, fetched comparatively high figures. Smelters are asking higher rates for English raw sorts, having disposed of considerable quantities of tough and select at their official quotations, 71L and 73L; they are, however, open to orders for manufactured at our list prices. Yesterday evening sales of tough and select were reported at 10s. to 20s. advance on the official rates.

**TIN.**—English is in good demand, and makers are firm at their quotations. Foreign sorts are a little easier, several shipments of Straits being advised by telegraph as coming to this port, and importers have been effecting sales of these at 132s. and 131s. per cwt., which has caused a reduction of about 1s. on cash parcels; of these last a good quantity has been taken for export, and judging from the deliveries for that purpose, and what is known to have gone away for home consumption, the stock in London at the end of the month is likely to show a considerable diminution from that of the 1st instant.

The settlement of the fortnightly account in the MINING SHARE MARKET has been very heavy this week, and has to some extent interfered with general business, though it has, nevertheless, been beyond the average of many months, and prices, with few exceptions, owing to speculative accounts, have been well sustained. The shares mostly dealt in have been Wheel Grenville, East Grenville, East Lovell, South Carn Brea, Prince of Wales, Great Wheal Vor, Tanquaril, Don Pedro, Great Laxey, West Maria, Crebor, New Beldon, Carn Brea, North Crofty, Tincroft, West Chiverton, Kitty (St. Agnes), Wheal Uny, and others. Carn Brea shares, 40 to 45; Cook's Kitchen, 17½ to 18½; Drake Walls, 23s. to 25s.; Dolcoath, 125 to 130; East Wheal Grenville, 2½ to 3.

East Lovell, 32 to 33; the north lode, 6½ fms. below the 80, is reported worth from 200L to 250L per fm.; the 80 east, 300L per fm.; and the wize below the 70 west, 80L or upwards. Prince of Wales have been largely dealt in up to 37s. 6d., 40s., and leave off 37s. to 39s. The silver lode continues worth 50L per fathom in the end, and we understand about 300L worth has already been raised, and that next month it is hoped a good quantity will be sold.

Bronfloyd, 2½ to 2½; at the meeting, on Wednesday, the accounts showed a balance of 1506L 14s. 11d. on revenue account, and a dividend of 1000L was declared, leaving 506L 14s. 11d. in hand. The agent's report stated that during the quarter he had only been able to sample 100 tons of lead ore, owing to alterations to floors, and the Christmas frost. The mine, however, is looking well at all points, and will shortly be in a position to increase its returns. East Frances, 30 to 32; at the meeting the accounts, charging October cost, and crediting 50 tons 12 cwt. of tin, 3876L 19s. 3d., showed a profit of 181L 13s. 7d., making with the balance carried forward at last meeting 637L 19s. 10d.; and out of this a dividend of 1L per share (512L) was declared, leaving 125L 19s. 10d. to carry forward. The agents, in their report, state that the reserves in the upper levels not being very large, the profits for the next quarter will partly depend on the holding of the wize from the 108 to the 120, which, when accomplished, will lay open some moderately productive tin ground. Roman Gravel, 10 to 11; the agent of Van has reported very favourably, and considers the different drivings, &c., will return 100 tons of lead per month for the next six months, and when more ground is opened 150 to 200 tons per month.

South Carn Brea, 10s. to 15s.; at the meeting the accounts showed a balance of 1041L 4s. 9d. against the shareholders, and a call of 2s. per share was made. The tin sold in the quarter realised 557L 11s. 5d. The lode in the shaft for the last 14 feet has been valued at 20L per fathom. Great Laxey, 17 to 18; Great Lovell, 1½ to 1½. Great Wheal Vor advanced to 9, on a reported improvement, but have declined again to 6½, 7½, sellers. Marke Valley, 6½ to 7½; North Crofty, 2½ to 2½; Perran Wheal Virgin, 32s. 6d. to 35s.; Providence Mines, 37 to 38; South Condurrow, 4½ to 4½; South Frances, 29 to 30; Tankerville, 13 to 13½; Tincroft, 48 to 49; Trumpet Consols, 20 to 22; Van, 54 to 56; West Maria and Fortescue, 26s. to 28s.; West Seton, 105 to 115; West Tankerville, 3 to 3½; Wheal Agar, 1½ to 2; Wheal Crebor, 12s. 6d. to 15s.; Wheal Grenville, 3½ to 4½; Wheal Jane, 54 to 57; Wheal Kitty (St. Agnes), 9 to 9½; Wheal Mary Ann, 12 to 14; Wheal Seton, 26 to 28; Wheal Uny, 3½ to 3½; New Beldon, 15s. to 20s.; Parys Mountain, 3 to 3½. Rosewall Hill and Ransom, 27s. 6d. to 30s.; the mine sold on Jan. 21 10 tons 2 cwt. of tin, at 80L 10s. per ton.

Taquaril leave off 46s. to 48s. Capt. Treloar wrote, in explanation of the telegram of last week, that the stamping-mill was not yielding so favourably as expected; that "the stamps and stamp-coffers were new, and the stuff treated is probably debris from the mine; the result of first month's stamping will be no criterion of the value of the lode." Upon this, however, shares declined to 37s. 6d., and large sales were made. On Thursday a telegram was received from Lisbon, dated Dec. 24:—"Bottom of old mine dry, improvement at stamps, main shoots in both lodes yielding riches, produce looking well.—Dec. 25: Gold cleaned to date, 1200 oitavas." The shares rose 10s. per share on this. Don Pedro, 2½ to 2½; the advices for November show a profit of 479L 0s. 8d., on a produce of 8301 oitavas of gold. The produce on account of December, weighed to the 17th, was only 1018 oitavas, which is thought to be a mistake. Eclipse, 24s. to 26s.; Sweetland Creek, 3½ to 4½.

Australian United, ½ to ½. The advices by late mail state that it will take three weeks (from Dec. 5) to cut the lode in the 260 ft. level, as the underlie was different to what the agents calculated. A few tons of stone from the 200 feet level had been crushed, with payable results. At the Central Mine the main gutter had not been reached, but gold to the value (174 ozs.) of 677L 13s. 10d. had been sold.

The Market for Mine Shares on the Stock Exchange during the week has been moderately active. Taquaril have fluctuated considerably, having on the receipt of the report fallen to 1, 1½ prem.; subsequent advices of a more favourable character established an advance to 1½ prem. Eberhardt shares close firmer. Sweetland Creek shares, on the intimation that the frost had delayed their washing operations for two or three weeks, were driven down to 3½; 4; subsequent advices state that a thaw had set in, that sufficient material had been blasted down to last for three months' washing, and that the prospects generally are highly favourable; shares are very firm, at 4 to 4½, and very scarce. Pacific shares are enquired for, at 1½ to 2. Eclipse shares have been ½ to ½ prem., but close ½ to ½. St. John del Rey and Don Pedros are steady. Birdseye Creek, ½ to ½ prem.; private advices, of a character confirming the official reports, have been this afternoon received. Tankerville, 13 to 13½; 75 tons of lead ore was again sampled yesterday; the mine is most favourably reported on. West Tankerville, 3½ to 3½; prospects for discoveries are good; this property adjoins Roman Gravel, with the same lodes. Roman Gravel, 10 to 10½; the report of Captain Williams, the manager of the Van Mine, who has inspected this property on three different occasions, to make himself thoroughly conversant with it, has been received; it is highly favourable, and confirms the advices of discoveries made since the mines changed hands.

Van, 55 to 57; the great discoveries in the eastern part of the mine, and also the general developments being made in the west, continue as rich as ever, opening up reserves equal to an addition of ten times the present returns. West Chiverton have been more offered, closing 47½ to 49½, but no change of importance is reported from the mines. Tin has fallen about 20s. per ton. The market for tin mine shares is very sensitive, fluctuating up and down on the market for that metal. The great feature in the rise is Carn Brea. Great Vor rose to 9½, but have fallen to 7½. Great Wheal Lovell is attracting attention. The lodes of East Lovell and Trumpet Consols (profitable mines) run through this sett. Subjoined are the closing quotations:—Asheton, 4½ to 4½; Tan-yr-Alit, 1 to 1½; Devon Great Consols, 97½ to 102½; East Caradon, 5½ to 5½; East Lovell, 31 to 32; Great Laxey, 17½ to 17½; Great Vor, 6½ to 7½ flat; Marke Valley, 6½ to 7; Tincroft, 48 to 49; Almada, 1½ to 1½; Cape Copper, 7 to 7½ prem.; Don Pedro, 14 to 14½ prem.; Eberhardt, 13 to 13½; Eclipse, ½ to ½ prem.; General Brazilian, 1-16th to 3-16ths prem.; Port Phillip, par to ¼ prem.; St. John del Rey, 23½ to 24½.

**IRISH MINE SHARE MARKET.**—The general business on the Dublin Stock Exchange has been and continues dull, but mining shares have verified almost sooner than we ourselves expected our opinion, recently expressed, that the unusually low prices would be sure to rise in a short time, and thus pay well the buyers either for investment



or mere speculation. Mining Company of Ireland shares, which a few days since were on sale at 67. 12s. 6d., have already advanced to 77. 2s. 6d., with ready buyers, at 77. (77. paid); and Wicklow Copper shares (27. 10s. paid), having only a few days since been on sale at 77. 10s., rose on Monday to 87. 12s. 6d. and 87. 15s., but sellers, for realisation of profits, brought them down to 87. 7s. 6d., leaving off firm. This last quotation is likely to be further improved by the very encouraging reports received as to the result of the company's new patent process for utilising the "sulphur-smalls," of which they possess a large accumulation on the mine, it having previously been almost unsaleable. It will also have been satisfactory to existing shareholders to learn, from telegram, that the "Wicklow Copper and Arklow Chemical Works" Bill, to be presented to Parliament, has been declared to have complied with the Standing Orders of the House. The dissatisfaction with the management of the Mining Company of Ireland, expressed by the shareholders at their last half-yearly meeting, continues with less sound reason than impatience, at having, for several years, for the first time, been disappointed in the declaration of a dividend. Were the shareholders to take the trouble to compare their balance-sheet with that of many other mining companies, they would find that their directors have charged to their profit and loss account several heavy items which might have been carried to capital or to an "exploration account." But there can be no doubt that the course adopted by their board of directors is the safest for future prosperity. Connoisseurs shares are in increased favour, at 5s. 6d. per share. Cape Copper shares are only nominally quoted at 137. 17s. 6d. to 147. Killaloe Slate Quarry shares stand firm, at 16s.

The BIRDSEYE CREEK GOLD MINING COMPANY (to which attention was directed some weeks since) has been formed for the purchase of sixteen auriferous gravel claims worked by the hydraulic process, as well as certain water rights, with a valuable aqueduct for supplying the requisite water. The properties are situated in Little York township, Nevada county, California. They have been worked very remuneratively for many years, and it is stated can be rendered much more profitable by the employment of the whole of the water in their development. It is calculated that by the most vigorous working the mines cannot be exhausted for fifty years. The purchase money is \$3,400, of which 20,000 is taken in paid-up shares. Mr. Albion Chadbourne, of San Francisco, states that the reservoirs and aqueduct have cost 20,000, and that permanent dividends of 5 per cent. upon the purchase price of the whole property would be realised from the sale of water alone, but adds that if the company should use all the water power, instead of selling it to other miners, he believes a monthly dividend of from 2000. to 3000. would be realised. There are also favourable reports from Mr. Charles Bever, M.E., of Grass Valley, California, and Mr. G. D. McLean, manager of Sweetland Creek. The prospectus appears in another column.

The PYRAMID RANGE SILVER MOUNTAIN COMPANY has been formed, with a capital of 500,000, in 100,000 shares, of 5s. each, for the purchase and development of silver ledges of unexampled richness in the neighbourhood of Arizona, United States. An assay of 40 lbs. of ore, consisting of 32 samples, was made by competent authorities in California, and found to contain from 86 to 134 ozs. of silver to the ton of ore. The purchase-money is fixed at 400,000, of which 100,000 is to be paid in cash, and the remainder in fully paid shares. The shares are of two classes—60,000 A shares, to have a priority dividend of 20 per cent. over the remaining 40,000 B shares. Messrs. Coates and Hawkes, of Gresham-street, are now ready to receive applications for 40,000 of the A shares. The prospectus will be found in another column.

The HUDSON RIVER COPPER COMPANY, whose prospectus is published in another column, is gradually filling up its list for the placing of the few unallotted shares. The fact of the mines being situated on the Hudson River, only about 45 miles from New York, is considered to be a great recommendation for the mine as compared with other American enterprises, as the facilities for management are so much greater.

The gold produced from the mines of the MORRO DA GLORIA COMPANY, to the formation of which with a capital of 75,000, in shares of 12. each, reference was made in last week's Journal, being of unusual purity (23 carats fine), will be worth upwards of 4s. per oz.; and as the auriferous formations in the property can be traced for more than a quarter of a mile, the prospects of large profits can readily be estimated. The shares are quoted  $\frac{1}{2}$  to  $\frac{3}{4}$  premium.

The TROY SILVER MINING COMPANY, with a capital of 50,000, in shares of 12. each, has been incorporated to acquire and work some valuable silver mining property in Beatty's Canyon, Nye County, Nevada, U.S. The mines consist of five ledges—the Blue Eagle, Troy, Meridian, Welland, and Oakland—containing 1800 ft. each, and certain land and premises adjoining. The Articles of Association provide that the directors may issue 20,000 fully paid shares as part of the consideration for purchase. Mr. Ellery, of New York, reports that, taken together as a mining property, he does not think these mines can be duplicated in Nevada; and Captain Aitken, F.G.S., of Bacup, Lancashire, mentions among the advantages connected with the property, the presence of a large number of well-grown pine trees, which clothe the canyons and hill sides, and which will furnish an available supply of fuel and timber for all purposes connected with the operations of mining and reduction of the ore for a very long period to come. Three cases of ore (not picked, but as it fell from the blast), have been analysed by Mr. David Forbes, F.R.S., and the results he has obtained show an average to the ton of ore of 26 ozs. of silver, 9 grs. of gold, and about 2 per cent. of copper. These results are considered by competent judges to be highly satisfactory. The purchase-money is already paid, the property is conveyed to the company, and the works will be completed, and silver bars shipped, as soon as possible. The prospectus will be found in another column.

At West Wheel Frances meeting, on Jan. 19, the accounts showed a credit balance of 638. A dividend of 512. (11. per share) was declared. Mr. Rabling having resigned the clerkship, Mr. John Rowe was appointed clerk, at 4s. 4s. per month.

At Bronfloyd Mine meeting, on Wednesday (Mr. Balcombe in the chair), the accounts showed a balance of 1560. 14s. 11d. on revenue account, from which a dividend of 1000. (1s. per share) was declared. The balance of assets and liabilities, after deducting the above dividend, showed cash in hand, on capital, 6268. 7s. 6d., and 5067. 14s. 11d. undivided on revenue. Lieut.-Col. the Hon. C.S. Vereker, and Messrs. Arthur Birch, George Desjardins, and Joseph Ramsdale, were elected to complete the board of directors. Mr. Thomas W. Plum being elected as auditor. A special resolution was passed to hold half-yearly meetings (in January and July) instead of quarterly, as heretofore, giving power to the board of directors to pay interim dividends for the intervening quarters. A vote of thanks was passed to the manager for the able manner in which he continued to conduct the company's affairs.

At North Pool Mine meeting (Mr. J. Rudall, jun., in the chair) the accounts showed a balance of 202. liabilities over assets, not estimating ore now ready for disposal, charging cost to December. A vote of thanks was accorded Mr. E. J. Bartlett for his exertions in bringing the mine into so favourable a position. The report, which appears in its usual place, will be read with interest.

At Dolwen Mine meeting, held on Wednesday, at the Victoria Hotel, Euston (Mr. Fauntleroy in the chair), the accounts showed:—Dr.: To balance, 20th Sept., 1870, 11s. 7d.—Against: Mine cost subsequent thereto, 1742. 13s. 1d.; leaving 211. 18s. 6d. The assets and liabilities showed 1500. further capital available for the prosecution of the mine, of which a call of 5s. per share, amounting to 7500., was made, payable on the 9th proximo. The directors were re-elected, and special resolutions passed to hold half-yearly instead of quarterly meetings.

At Wheal Courtenay meeting, yesterday (Mr. S. W. Dawkes in the chair), the accounts to end of December showed a balance due to treasurer of 832. 3s. 7d.; and liabilities in excess of asset, of 392. 12s. A call of 1s. 6d. per share was made, payable on Feb. 4.

At Llywernog Mine meeting on Wednesday, at the Victoria Hotel, Euston (Mr. A. Bridge in the chair), the balance-sheet showed:—Dr.: To receipts, 2363. 17s. 10d.; and working cost for the quarter, 3307. 1s. 5d.; leaving balance in hand, 2026. 16s. 5d. The accounts were passed, the retiring directors re-elected, and Mr. Alfred Rhodes elected a director in lieu of Mr. James Rhodes, deceased. Mr. Thos. W. Plum, of Malins Lee Hall, Shifnal, being appointed auditor. Special resolutions were passed to hold half-yearly meetings instead of quarterly ones.

At Great Royalton special meeting, on Wednesday, the resignation of Mr. G. H. Poulton and Mr. James Murray, of Torquay, as members of the committee was accepted. Mr. John Corcoran, of Louth, being elected a member in their place. The mine has much improved during the last few days, an important point being the increase in value of King's lode in depth. In the 22 ft. it is about four times as rich as in the adit, 12 fathoms above.

At the Great South Tolgus general meeting, on Friday, a call of 3s. per share was made; and at the special meeting, held immediately afterwards, it was determined to continue operations at the mine.

At the Penhale Wheel Vor Quarterly meeting, on Tuesday (Mr. T. Holroyd in the chair), a statement of accounts was presented showing a balance of liabilities over assets of 78. The agent's report detailing the work done, during the past three months, and giving his opinion of the prospects of the undertaking, was read to the meeting, and a call of 10s. per share was made.

At East Caradon Mine meeting, held at Salisbury, on Jan. 11, there was a credit balance of 31367. Costs, 2682. including dues, 154.; credits for three months, 31197. The balance in favour of the adventurers at the last meeting was 26997., which has been increased during the past three months by 4377. which, of course, constitutes the profit for the quarter. The prospects of the deeper northern lodes are very promising.

COAL MARKET.—The fresh arrivals this week number 85 ships, principally screw steamers. The coal weather increased the demand for household coals, and a rise in price of fully 6d. per ton is established. In Hartleys no improvement. Hetton Wallsend, 18s. 6d.; Hetton Lyons Wallsend, 15s. 6d.; Tunstall Wallsend, 15s. 6d. Un-sold, nil; 15 ships at sea.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Higginson, Liverpool, we learn that the quantity of coal exported in December was 826,608 tons, against 810,010 tons in the corresponding month of 1869, showing an increase of 16,598 tons. The particulars are—From the Northern Ports, 377,705 tons; Yorkshire, 43,151 tons; London, 4214 tons; Liverpool, 57,755 tons; Severn Ports, 286,858 tons; and Scotch Ports, 56,925 tons. The increase was—Northern Ports, 1327 tons; Liverpool, 6598 tons; Severn Ports, 19,361 tons. The decrease—Yorkshire, 370 tons; London, 398 tons; Scotch Ports, 9920 tons. Total, January to December, 1870, inclusive, 10,635,449 tons, against 9,775,470 tons in 1869.

THE UNDERSIGNED TRANSACT BUSINESS AT DEALING PRICES, net, in the following—(others not named, BOUGHT or SOLD, if practicable):—

Ashton.	Kitty (St. Agnes),	Tinroft.
Bronfloyd.	Marko Valley.	Tankerville.
Cook's Kitchen.	Margaret.	Terras Tin.
Carn Camborne.	North Crofty.	Van Consois.
Dolcoath.	New Lovell.	West Chiverton.
Drake Walls.	Providence.	West Frances.
Don Pedro.	Penhalis.	West Tankerville.
East Lovell.	Penrhyn.	West Seton.
East Sisset.	Prince of Wales.	West Pant-y-Go.
East Seton.	Plympton.	Wheal Seton.
East Caradon.	Perran Virgin.	Wheal Uny.
Kellpae.	Rosewall Hill.	Wheal Agar.
Great Lovell.	Roman Gravel.	Wheal Jane.
General Brazilian.	South Frances.	Wheal Crobo.
Herodfoot.	Sweetland Creek.	

Parties enquiring state number, when all communications will meet prompt attention.

JAMES BRENCHELY, 32, Nicholas-lane, Lombard-street, London, and Mining Exchange (Established Eighteen Years).

GRATIS—FORWARDED ON APPLICATION.

A TABULAR STATEMENT OF DAYS OF MEETING OF THE PRINCIPAL MINES DEALT IN ON THE LONDON MARKET. A useful reference to investors and purchasers.

JAMES BRENCHELY, 32, Nicholas-lane, Lombard-street, London.

MESSRS. WM. MARLBOROUGH AND CO., 29, BISHOPSGATE STREET WITHIN, LONDON, E.C. (Established 16 years), HAVE FOR SALE THE FOLLOWING SHARES at prices annexed:—

25 Aberdunant, 27s.	10 East Pool, £103.	10 So. Condover, £43.
50 Australian Uni., 9s. 3d.	50 Frontino, 9s. 6d.	1 South Frances, £30.
20 Bwadrain Con., 27s.	20 Great Lovell, 33s. 6d.	20 Sweetland Ck., £41.
10 Blue Hills, £23.	5 Great Vor, £25.	20 South Aurora, 1/2 dis.
20 Bwch Consols, 39s.	50 Lovell Consols, 5s. 6d.	5 Tankerville, £13.
20 Bronfloyd, £21. 11s. 3d.	50 Mineral Bot., 4s.	20 Tancarril, 32s. pm.
5 Cook's Kitchen, £18.	20 New Lovell, 30s. 6d.	30 Terras.
30 Calbeck Fells, 18s.	50 North Pool, 19s. 9d.	5 Tinroft, £48.
10 Cefn Consols, £43.	20 North Crofty, £24.	10 Trevarrack.
10 Carn Brea, £14.	20 New Beldon, 16s. 9d.	2 Van, £55.
10 Caerphilly Col., £2 1s.	20 Okel Tor, 16s.	20 Van Consois, 32s. 3d.
30 Drake Walls, 24s. 6d.	5 Providence, £34.	10 Wheal Uny, £34.
20 Don Pedro, 35s. pm.	20 Pen Alt, 25s. 6d.	2 Wheal Agar, £12.
5 East Lovell, £32.	20 Perran Virgin, £1 7 9	5 Kitty (St. Ag.), £9 8 6
10 East Seton, £5 8 9	20 Prince of Wales, 36s. 3	20 W. Tankerville, £23.
25 East Seton, 24s. 9d.	20 Perran Virgin, 30s.	2 West Chiverton, £49.
50 Kellpae, 9s. 3d. pm.	20 Rosewall Hill, 30s.	2 West Jewell.
5 Eberhardt, £13.	10 Roman Gravel, £10.	20 West Maria, 28s. 6d.
	20 South Merilyn, £3.	

MESSRS. W. DUNN AND CO., STOCK AND SHARE-DEALERS, 3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

Bankers: National Provincial Bank of England.

FOR SALE, at prices affixed:—

10 Aberdunant, £1 3s. 6	15 Frank Mills, £1 10s. 6	10 Tan-yr-Alit, 25s.
10 Bedford Cons., £23 9	40 Gt. Wh. Lovell, £1 10	25 Tancarril Gold, 32s. pm
25 Birdseye Ck., 2s. 6 pm.	5 Great Vor, £25.	25 Terras.
10 Blue Hills, £23.	10 North Crofty, £23s. 6d.	2 Tinroft, £40 5s.
15 Bronfloyd, £27 7s. 6d.	25 Pen Alt, £1 17s.	40 Van Consois, £1 11s.
5 Carn Brea, £14.	20 Perran Virgin, £1 7 9	2 W. Chiverton, £49.
20 Carn Camborne, £1 6s.	20 Plymouth, £23 3s.	1 West Frances, £29.
30 Chionates, 10s.	3 Providence, £37.	30 West Jewell.
10 Chiv. Moor, £2 13 6	25 Prince of Wales, £1 16	10 West Maria, £1 7s. 6d.
20 Don Pedro, £1 15 pm.	5 Roman Gravel, £10.	50 West Pant-y-Go, 15s. 6
50 Drake Walls, £1 5s. 6	30 Rosewall Hill, £1 10s.	1 W. Wh. Seton, £110.
5 East Caradon, £5.	2 So. Frances, £31.	20 W. Tankerville, £23 1s.
10 East Greenville, £2 6	150 So. Gt. Work, 4s.	10 Wheal Agar, £1 12s. 6
5 East Lovell, £32.	10 Sweetland Creek, £11	10 Wh. Greenville, £4.
20 East Seton, £1 5s. 6d.	5 Tankerville, £13.	2 Wheal Seton, £29.

CALDBECK FELLS MINE, January 24, 1871.

I am a BUYER of these SHARES at 15s. per share net.

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Address: "M. B." MINING JOURNAL Office, 26, Fleet-street, London, E.C. January 17, 1871.

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In 12,000 shares, £7 10s. each, fully paid.

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SECRETARY—F. R. WILSON, Esq.

OFFICES,—20, ST. HELEN'S PLACE, E.C.

Mr GEORGE BELL, Deceased.

PURSUANT to the 29th Section of the Act of Parliament, made and passed in the 22nd and 23rd years of the reign of Her Majesty, Queen Victoria, chapter 35, intitled "An Act to Amend the Law of Property and to Relieve Trustees," Notice is hereby given, that ALL CREDITORS and OTHER PERSONS having any CLAIMS or DEMANDS UPON or AGAINST the ESTATE of GEORGE BELL, late of BOLTON-LE-MOORS, in the county of LANCASTER, Ironfounder, deceased (who died on the 26th day of November, 1870, at Harrow, in the county of Middlesex, and whose will was duly proved by JOHN SHARPLEY, of Sharpley, Flax Spinner, in the said county of Lancaster, and GEORGE GREEN, of Tidesley, in the said county of Lancaster, Colliery Proprietor, the surviving executors of the said will, in the District Registry of Her Majesty's Court of Probate, at Manchester, on the 28th day of December, 1870), are hereby REQUIRED TO SEND, in writing, the PARTICULARS OF THEIR CLAIMS OR DEMANDS to the undersigned, on or before the 1st day of April next; or in default thereof the said executors will, at the expiration of the said last-mentioned day, be at liberty to distribute the assets of the said GEORGE BELL, deceased, or any part thereof, amongst the parties entitled thereto, having regard only to the debts and claims of which they shall then have had notice; and the said executors will not be liable for the assets, or any part thereof, so distributed to any person or persons of whose claim they shall not then have had notice.

HUTTON AND SON, 2, Bowkers-row, Bolton (Solicitors to the Executors).

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN THE MATTER OF THE COMPANIES ACT, 1862, and of the WHEAL PAR MINING COMPANY.—By direction of His Honor the Vice-Warden, notice is hereby given that on Tuesday, the 14th day of February next, at Eleven o'clock in the forenoon, at the Registrar's Office at Truro, in the county of Cornwall, this Court will PROCEED TO MAKE A CALL OF SIX SHILLINGS PER SHARE on all the Contributors settled on the List of Contributors of the above-named company as present members thereof.

All persons interested therein are entitled to attend personally, or by solicitor or competent agent, at the time and place aforesaid, to offer objections to such call.

FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, January 24, 1871.

TURTON, NEAR BOLTON, LANCASHIRE.

SALE OF THE WELL-KNOWN TURTON MOOR COLLIERY AND FIREBRICK WORKS, now in active operation, with all the EXTENSIVE ERECTIONS, valuable PLANT and MACHINERY, TRAM-ROAD, &c., belonging thereto, including the LESSEE'S INTEREST in the COAL and FIRE-CLAY under about 400 acres of land.

MESSRS. WM. LOMAX, LOMAX, SONS, AND MILLS

respectfully announce that they are instructed by the Trustees under the will of the late Robert Heywood, Esq., to OFFER BY PUBLIC AUCTION, on Wednesday, the 15th day of February, 1871, at Five for Six o'clock P.M. most punctually, at the Three Crowns Inn, Deansgate, Bolton (if not in the meantime disposed of by private treaty), subject to such conditions as shall be then produced, the LEASEHOLD ESTATE and INTERESTS of the VENDORS of and in all that COLLIERY and FIREBRICK WORKS, known as

TURTON MOOR COLLIERY.

Situate at TURTON, five miles from Bolton, immediately adjoining the turnpike-road leading from Bolton to Over Darwen and Blackburn, with the machine house, cart set, tramroad, office, workshops, grinding and drying sheds, kilns, chimneys, and other erections, and the whole of the mines or beds of coal and fire-clay under 400 statute acres or thereabouts of land, at Turton Moor; together with the valuable STEAM ENGINES for winding, pumping, and grinding purposes, with the BOILER, SHAFT FITTINGS, TRAMWAYS, WEIGHING MACHINE, GRINDING MILL, and other MACHINERY and PLANT in and upon the premises, a schedule of which will be produced at the time of sale. The colliery is opened out by a winding shaft and adit, and has a drift about 52 yards in depth, with roadways driven therefrom, and the mines have been proved to be of excellent quality, the produce commanding ready sale in the district.

The colliery is held by lease, dated the 16th March, 1870, for the unexpired residue of a term of twenty-eight years and three quarters, commencing on the 25th day of December, 1867, subject to the yearly footage rent of £50 per foot per Lancashire acre of 340 square yards for coal, and to an acreage surface rent of £20 per superficial Lancashire acre, irrespective of the thickness, for the fire-clay, such footage and acreage rents to yield a minimum year's profit of £120 during the said term, and to the covenants and conditions in the said lease contained.

A plan of the workings may be seen, and particulars with other information may be had by applying to Mr. JOHN CROSS, Mining Agent, Cross-street, Manchester; or to Messrs. HURSTON and ARMISTEAD, Solicitors, Bolton, at whose offices a plan of the workings of the mines, and a copy of the lease, may be seen. Bolton, January 16th, 1871.

TO IRONMASTERS, AND MANUFACTURERS OF SUPERIOR

PIG-IRON

ADAPTABLE FOR BESSEMER STEEL, &c.

FOR SALE, BY PRIVATE TREATY, A MINE OF MAGNETIC IRON ORE, yielding from 60 to 65 per cent. of superior cast-iron in the blast-furnace. The property consists of 150,000 square metres, and is capable of producing very considerable quantities of ore. It is four kilometres distant from the coast. Freight to South Wales and North-Eastern ports would be about 12s. per ton. Address: "Box 5," Swansea.

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THE UNDERSIGNED OFFERS FOR SALE the MINERALS on Lot No. 19 in the Sixth Concession of the Township of BURGESS, County of LANARK, CANADA, being one of the best of the Canadian Phosphate Lands.

The first thousand tons can be laid down at Montreal at 25s. sterling per ton. The asphaltic ore contains from 80 to 90 per cent. of phosphate of lime. Terms £200 sterling, or a contract will be taken for the delivery of phosphate in Montreal. Apply to—

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Apply to Mr. A. SNOW, 83, Alexandra-terrace, Newport, Isle of Wight.

With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Original Correspondence—Birmingham and the Black Country, No. VI.; Collieries in Durham and Northumberland, their Workings and Machinery; Late Colliery Explosions (S. P. Bidder); Oil v. Gas, and Mr. Silber's Lamp; New Steam-Stamper (W. Synncock); Steatite; Dynamite; Mining in Nevada and California; Use and Abuse of the Telegraph; Tin in Mundic (T. L. Phipson); Metals and their Ores (E. Gledhill); East Wheal Lovell, illustrated (H. Waddington); East Lovell, and Capt. Pascoe; East Carn Brea (H. Waddington); North Treskerby; Prince of Wales—Recent Improvements in Tin Dressing (J. H. Collins)—The Treasures of New Mexico—Foreign Mining and Metallurgy—Monthly Summary of Mining in Australia—Foreign Mines Reports—Patent Matters, &c.

LEAD ORES

Date.	Mine.	Tons.	Price per ton.	Purchasers.
Jan. 21—	Wheal Trelawny	41	£22 10 6	Stock and Co.
—	ditto	25	5 6 6	Sim's, Williams, & Co.
22—	Cwmystwith	35	11 1 6	Adam Eytan.
24—	Stipetstones	60	11 13 0	Burry Port Company.

BLACK TIN.

Date.	Mine.	Tons.	Price per ton.	Amount.	Purchasers.
Jan. 18—	Pedun-an-drea	13	9 2 1	—	£114 2 11—Tregoning.



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**WESTWARD BY RAIL: FROM New York to San Francisco.**

By W. F. RAE.

"The increasing interest felt in this country in all that relates to the Pacific States, in consequence of the large amount of British capital invested in the Mines, will doubtless cause Mr. W. F. Rae's 'Westward by Rail' to be read by a very large number of Englishmen; and as it is as amusing as it is replete with information, no one will regret an acquaintance with it. An entire chapter is devoted to the description of the State of Nevada and its silver treasures, and in this connection Mr. Rae affords a useful hint to intending investors. His book should be carefully studied by all classes of readers, both in England and America."—*Mining Journal*.

### Notices to Correspondents.

\* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

**BOSCHAN.**—Can any reader inform me if this mine is still working; when a meeting of the shareholders was last held; and what is the financial position of the company?—*SUSCRIBER: Manchester*.

**MINING JOURNAL OF JAN. 29, 1870.**—Any subscriber having more than one copy of this date will much oblige by sending his extra copy to our office, when the full price will be returned for it.

**MINING LITERATURE.**—"T. L." (Kirkcaldy, Perth).—We do not think there is any one book that would contain all the information you ask for. In the first place, you want a full description of the different ores and their contents; this would be obtainable from Phillips's Metallurgy (1 vol., 12s. 6d.); Percy's Metallurgy (3 vols., about 5l. 5s.); Keri's Metallurgy (2 or 3 vols., translated by Crookes and Rohrig, price about 5l. 5s.); and Gigg and Lettson's Mineralogy (1 vol., about 1l. 1s.). Next you ask for a book on dividing the different ores one from another; Phillips's Metallurgy, as above, will probably give you as much information as you can learn from reading; we believe there are some others, but cannot remember them at the moment. As to assaying, there is Crookes's edition of Mitchell's Assaying (1 vol., about 1l. 1s. 6d.); Noad's Chemical Analysis (an excellent little book, about 10s.); several translations of Fresenius, Böley and Paul's, and a host of others, which would be useful in a library. Any analytical chemist would be capable of assaying a sample of gold; there are plenty of them at Newcastle-on-Tyne—Marree, Neville Hall, John Pattison and R. S. Thorpe, Side; and Richardson and Brownell, Westgate-street.

**WEST MARIA AND PORTSCUPE MINES.**—We cannot publish any further letters on the matters in dispute while the legal proceedings are pending. Doubtless a meeting of the company will be shortly convened, when every requisite enquiry can be made by the shareholders.

**HARLEIGH UNITED (Merionethshire).**—In consequence of the delay of the engraver, the illustrative diagrams of these mines cannot appear this week, but will be inserted in our next Journal.

**SCALE FOR ADVERTISEMENTS.**—Our charge for general advertisements is—for six lines and under, 4s.; per line afterwards, 8d. Average, 12 words per line.

**SHARE DEALING.**—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

## THE MINING JOURNAL

### Railway and Commercial Gazette.

LONDON, JANUARY 28, 1871.

#### WATER BREAKING INTO COLLIERIES.

"We staggered forward, and presently I felt Regan was being pulled forcibly, so I held on with all my might, and in an instant we were dragged clear of the great body of water, and I stood with my companion amidst the workmen who had rescued us, and who, with tears streaming down their cheeks, seemed overcome with the joy they felt at seeing us standing there alive and well."

Thus spoke one of the two colliers rescued bravely on Sunday from the Wheatley Hill Colliery, after having been down some 54 hours, struggling most of that time with water and foul air. The accident by which his life was imperilled, and by which the lives of five companions were taken, happened on Thursday last. The colliery is described as standing on the hills to the north-east of Thornley, from which place it is distant about a mile and a half, and it has been in operation for about six months, the Five-quarter seam and the Main coal, the latter 129 fms. deep at this place, being alone as yet reached. It belongs to the original Hartlepool Colliery Company (Limited), and Mr. JAMES BURN, late of Rainton, is the viewer. It seems that on the east side of the Thornley Colliery, also owned by the Hartlepool Company, extending over several acres, are some old workings that have for a long time past formed a receptacle for water drawn out of certain portions of the workings. When the Wheatley Colliery was started the design was to carry this water away by running it down to the Wheatley Hill Colliery No. 1 shaft, a distance of about 800 yards. This shaft is stated to be about 7 fms. lower than the Thornley workings. To convey the water down to the shaft a drift was run from the Thornley Colliery Hill workings, with a fall of 1 in. to the foot. To get out the water thus brought down a pump, lifting 80 gallons per stroke, and capable of working 10 strokes per minute, was erected. The continuity of the water to the drift in the Thornley Colliery was indicated by holes in the face of the coal, about 3 feet. A heaver was at work at this place at about mid-day on Thursday, when the water broke through.

What afterwards happened is told elsewhere. That there were no more than five men sacrificed must be a source of much satisfaction to everyone, especially those having the responsibility of the operations. The two men who were got out owe their lives to the intimate knowledge which one of them possessed of the workings, and the road to the higher level, from which the water broke in, as well as to their power of physical endurance. Two companions who shared their vicissitude being less strong succumbed, and died by their side only a few hours before these were relieved.

How much this accident resembles those which have gone before it. First comes up the historic inundation at the Nine Locks Pit, belonging to the Earl of DUDLEY, in March, 1869. The inquiry in the Wheatley Hill case has not yet concluded, and we have no more remarks to make upon that accident here; but in the face of that enquiry it may be well to give, which we do, what the Government Inspector for South Staffordshire wrote of the Nine Locks inundation, in his annual report:—

"When the state of the mine admitted of my examination, the cause of the sudden eruption of water was evident, as I found a tunnel 1 ft. wide and 2 ft. deep, in the foundation of a dam, which had been constructed in one of the main water-levels, through which the water rushed, and rose to a maximum height of 48 ft. above the main pipe in the dam, which, however, was fortunately kept from flowing far into the interior of the mine, owing to the high rate of inclina-

tion of the coal seam from the bottom of the pit shaft, and to which the safety of the entombed men was solely due. Had the coal seam been level, or nearly so, the water would have, no doubt, prevailed throughout these workings to a depth of about 6 or 7 feet, and every living thing must have inevitably perished.

Evidence was given at the inquest held on the body of ASHMAN, to the effect that the dam in question had been constructed for the purpose of keeping water back in the 'trough pits' of this colliery, to extinguish an underground fire, and that the water which had previously accumulated had been gradually drawn off through the 'trap' in the dam. However, whether this was so or not, an overwhelming flood of water did evidently accumulate somewhere behind the dam, which at length rushed into the pit in question, and for several days placed the life of every person therein in the most imminent peril. Evidence was also given that the dam was a proper thing to put in this water-level. Opinions were also offered that the cause of its failure under pressure was due to the friable character of the foundation, and that it was also rendered less secure by blasting, in which opinions I fully concur. But, as to the dam itself, I may say that in the whole course of 35 years' experience in mining, and in some collieries where there has been more than three times the quantity of water to contend with, I never knew a dam of any importance constructed in a main water-level, for it may in truth be said that what the colliers are to the human body so are the water-levels and air-courses to a healthy and properly conducted colliery. The construction of a permanent dam in a water-level is at any time, and especially in this instance, considering the circumstances and relative positions of the respective pit shafts and workings at and in connection with the Nine Locks Pit, an unwise step. Moreover, accumulations of water have in several instances, brought about in certain parts of the country accidents of the most distressing character; therefore, to create or allow such an accumulation, especially in the crop or main pipe, whilst it is still being worked in the dip, and where the only means of ingress and egress are also in the dip thereof, is, whilst the men are in the mine, in my opinion, most improper, and too dangerous to be thought of.

The Tyne district is not strange to inundations. On May 3, 1815, 41 men and 34 boys lost their lives by water breaking into the Heaton Colliery there. This colliery was a very deep one, and the working pit was (the same as the Nine Locks pit is situated) in the extreme deep of the mines without any means of escape for the miners, and in the crop or rise of the Heaton pit was a considerable area of old workings, dating about 1714, filled with water. No plans or records of these old workings had been kept, so that the manager was to some extent in the dark as to their whereabouts. At half past four o'clock on Wednesday morning, May 3, 1815, the new workings had reached a fault which let in the whole of the water from the crop, and filled the pit shaft for 33 yards with water, thereby cutting off all hope of escape for 75 poor miners who were in the pit, and who had got into the rise working for safety. Three very large pumping-engines were set to work to get out the water, and collectively discharged 1200 gallons per minute. This pumping was continued the following day, and on Friday morning, being the third day, 66 yards of water was in the pit bottom, the water having risen 28 yards in two days. It was not until Jan. 6 (nine months after the accident) that the first corpse was brought to bank; of course, in a great state of decay. The first remains were those of a miner between 70 and 80 years of age, who was identified by his neckerchief. Of his pocket-knife little was left, except the bone handle, the blades having rusted away. His watch was nearly destroyed from the same cause. The articles of linen worn by the deceased were quite fresh and uninjured, but the woollen fabrics were entirely destroyed. In a short time after the whole of the remains of the victims were recovered. In this case, as in the Brierley Hill accident, the men and boys appeared to have kept to the edge of the water in the crop or rise workings, and had died by two's and three's as the water had receded by the pumping, and as their failing strength had permitted the survivors to follow it.

We have no room left to speak here of the inundation at the Molineux Colliery, Mansfield, which happened soon after the Brierley Hill occurrence. Of that we shall have something to say when the inquest at the Wheatley Colliery is over.

#### COLLIERY GASES, AND COLLIERIES VENTILATION.

The professional ability of the gentlemen from time to time appointed by the Home Secretary to fill the very important office of Government Inspector of Coal Mines in the several districts have always been ample to secure them the confidence of both coal owners and colliers, and the names of MACKWORTH, DUNN, DICKINSON, ATKINSON, and BROUGH are known far beyond the districts they are (or have been, for only two of them remain amongst us) entrusted with through the earnest efforts they have made to facilitate the acquisition of a knowledge of the higher scientific principles of colliery engineering by all connected with collieries. Mr. ATKINSON was ever a prolific writer upon colliery ventilation, and matters referring to it, and his treatise on "The Gases met with in Coal Mines, and the General Principles of Ventilation," which was communicated as a paper to the Manchester Geological Society, is as valuable to practical men as any that has been written, and the reprinting of it in pamphlet form is certainly a matter for congratulation. As the object of the author was to give the merely practical miner a general knowledge of the laws and principles of ventilation, and of the nature and properties of the atmosphere, and of the gases most frequently encountered in coal mines, the treatise is necessarily of a popular character, and whenever tables and formulæ are introduced particular care is taken to explain them in such language that the misunderstanding of them is impossible—underventurers, overmen, deputies, and workmen may alike profit by the study of the details given, and fit themselves for fulfilling either of those offices with credit and honour.

The description given of the nature and effects of a colliery explosion, although brief, is particularly vivid. Some of the gases given off in coal mines when mixed with certain proportions of air form violently explosive mixtures. Such a mixture of air and gas on being ignited by a naked light suddenly explodes, and becomes one mass of living flame, scorching and burning everything that may happen to be in contact with it. Such an explosion in general also creates a complete hurricane or tornado of immense force and violence, tearing and driving all before it—knocking down the masonry erected for the guidance of the ventilation, as well as the props and timber erected to support the roof of the mine, which falls in great masses, causing bodily injury or death to those it may fall upon, and often enclosing and imprisoning those who being unhurt by its fall are left stunned by the concussion, more or less scorched by the flames, and without lights shut up to breathe the deleterious atmosphere produced by the explosion. The flames of such an explosion being extinguished, and its violence exhausted, there remains an atmosphere so hot, and so charged with noxious gases and steam, as to cause the death of all who are left alive to inhale or breathe it. This resulting atmosphere is generally termed after-damp. The grand object of the ventilation of mines is to cause such a current of air constantly to circulate through them as shall, by mixing with and diluting the gases, render them harmless, and in that state carry them off as quickly as they are produced in the mines. To permit of the subject being thoroughly understood by the class for whom the book is intended great care is taken to explain the chemical composition of atmospheric air, and the nature and properties of nitrogen, oxygen, carbonic acid, carburetted hydrogen, carbonic oxide, sulphuretted hydrogen, and the natural laws and principles affecting the ventilation of mines.

The chapter on the friction of air in mines is a very valuable one, and cannot be too carefully studied by those connected with collieries. The pressure required to overcome the friction of air increases and decreases in exactly the same proportion as the area or extent of the rubbing surface. The rubbing surface, of course, depends upon the circumference or perimeter of the airway, and upon its length. A circular pipe or airway offers less rubbing surface for the same length than any other form or shape of airway of equal sectional area, because the circumference of a circle is less in proportion to its area than the perimeter of any other figure is to its area. With regard to the shape and size of airways, he explains that in an airway 5 ft. square the perimeter of the section is  $4 \times 5 = 20$  ft., and if it be 1000 long the rubbing surface is  $20 \times 1000 = 20,000$  square feet. In an airway 10 ft. square the perimeter of the section is  $4 \times 10 = 40$  ft., and if it were 1000 long the rubbing surface would be  $40 \times 1000 = 40,000$  ft.; so that on comparing the two cases it will be apparent that four times the area there is only twice the extent of rubbing surface. If such an airway as that last mentioned were divided into four equal sized square airways, the rubbing surface exposed to the moving air would be exactly doubled by the division, and there would be 20 ft. of perimeter for each of the four airways, or 80 ft. on the whole; so that for a length of 1000 ft. the rubbing surface of the four small airways would be 80,000 square feet, or exactly twice as great as that for the

one large airway, although the united areas of the smaller airways would be exactly equal to that of the single large one. From this fact we learn that one large airway is preferable to a number of smaller ones, even if they together make up the same sectional area or size. In practice it often happens, however, that a number of small airways can be made and maintained at less cost than one large airway presenting an equal sectional area, and in such cases a few extra airways of small area may more than compensate in utility and make up in cost for the absence of one extra-sized airway; and hence the utility of insisting upon the sectional area of airways in mines being of any particular amount, without specifying their number, beyond requiring that one at least in each split be large enough to admit of persons travelling in it. The same principle may be illustrated by taking two airways of equal size or sectional area, but having different forms or shapes of sections, and he shows that in an airway 10 ft. high and 10 ft. wide=100 ft. sectional area, the rubbing surface is only 40 ft., whilst in another of the same sectional area, but being 20 ft. wide and 5 ft. high, the rubbing surface is 50 ft.

Throughout the book the probable educational attainments of those for whom it is intended have been well considered; thus, although the various formulae has been in all cases given, care has been taken to accompany each by a statement in words which cannot fail to be intelligible to all. The book is entitled to extensive circulation for its intrinsic worth, and still more so when the object of its publication—that of benefiting the family of the author—is taken into consideration.

**EFFECT OF COLD ON IRON AND STEEL.**—A series of interesting papers have been read before the Manchester Literary and Philosophical Society, bearing upon the question of the effect of intense cold upon the strength of iron and steel, and the results show that the cold has no appreciable effect, and that it certainly does not diminish the strength of the iron. Mr. W. BROCKBANK collated the results of experiments made by various persons, and gives one curious statement. Similar frozen bars were tested whilst still frozen, and after having been thawed, and allowed to cool to the ordinary temperature. The frozen bars were more crystalline, and showed no sign of fibre, whilst those thawed show a good amount of fibre, and were slightly crystalline in the fracture. This is most remarkable, since the thawing would thus seem to restore the fibre, which had been destroyed by the frost as most improbable. Sir WILLIAM FAIRBAIRN, Bart., in a paper he contributed, in consequence of the discussion at the previous meeting, states that the danger from broken tyres does not, in his opinion, arise so much from changes of temperature as from the practice of heating them to a dull red heat, and shrinking them on to the rim of the wheels. Most, if not the whole, of railway tyres, excepting those of engines and tenders, are not turned, but selected by hand, heated and shrunk on the wheels with every degree of tension, as suits the convenience of the workman. Dr. JOULE has made a series of experiments upon the subject, which result in the general conclusion that frost does not make either iron (cast or wrought) or steel brittle, and that accidents arise from the neglect of the companies to submit wheels, axles, and other parts of their rolling-stock to a practical and sufficient test before using them. The experiments by Mr. P. SPENCE, which form the subject of another paper, showed that reduction of temperature, other things being equal, increases the strength of cast-iron.

**CHEAP COAL FOR IRELAND AND THE WESTERN HIGHLANDS.**—An effort is about to be made to develop a valuable mineral property, comprising about 4300 acres of coal and blackband iron in a good locality, by the inauguration of a public company, with a capital of 50,000l. There will shortly be good railway communication to a shipping port 10 or 12 miles distant, and an excellent and profitable business could then be opened up with the northern and western Highlands and with Ireland both for coal and iron. The property includes three distinct estates, but they all join each other, and will be worked together, and two new branch railways, which will pass through them, will be opened for traffic during the current year. Bore-holes have been put down in two of the estates, and good gas and coking coal has been proved to exist there in three fine seams. There is also a seam of oil shale  $\frac{1}{2}$  ft. thick, yielding 28 gallons to the ton. The seams of coal are from  $\frac{1}{2}$  ft. to 8 feet thick, and fire and pottery-clay is found in good paying quantities. On one of the estates, 1200 to 1300 acres in extent, the lowest seam is not more than 40 fms. from surface, and a shaft has been sunk to the black-band iron, which was worked to a small extent even when there were no facilities for getting it to market except cartage. This shaft is now full of water, but could readily be unwatered and utilised. The black-band averages about 22 inches thick, and exists beneath all three estates. The lease has been offered at a merely nominal price, all that the proprietors require being that the necessary capital shall be provided for opening out and working the property.

**THE EXPORT COAL TRADE.**—The exports of coal from the United Kingdom in the first eleven months of 1870 amounted to 10,576,880 tons; for the whole year they probably barely attained an aggregate of 11,500,000 tons. This total would, however, present a considerable increase over the aggregate exports of 1869, which amounted to 10,595,994 tons. The foreign demand for British coal would appear to be greatly increasing, having amounted in 1855 to 4,976,902 tons, in 1860 to 7,321,832 tons, in 1865 to 9,170,477 tons, and in 1870 to about 11,500,000 tons. At this rate the consumption of British coal abroad has thus considerably more than doubled during the last 15 years. The value of the coal exported has grown in a corresponding ratio, having been 2,446,341l. in 1855, 3,316,281l. in 1860, 4,427,177l. in 1865, and, as nearly as can be estimated, 5,500,000l. in 1870. It may not, perhaps, be generally known that in ordinary times Great Britain now exports about as much coal as France produces.

**THE AUSTRIAN COAL TRADE.**—A valuable chromo-lithographed chart, showing the distribution of the Bohemian brown coal, whether by railway or water-carriage, has just been issued (through Mr. C. H. HUNGER, of Prague), by Mr. JOHANN PECHAR, the managing director of the Dux-Bodenbacher Railway. No pains seem to have been spared in the preparation of the chart, and from it a large amount of information of great importance to those concerned in the German coal trade can be seen at a glance.

**GREAT YIELD OF THE AMERICAN COAL FIELDS.**—A return issued of the yield of the Pennsylvania coal fields is interesting, as showing the great coal resources of America. It appears that, despite the periodical strikes which affect the production of portions of the great American coal fields, the total quantity mined annually shows an increased transportation to the markets. By the official reports of the leading railroads and canals of Pennsylvania it appears that the total amount of anthracite coal carried by them in 1870 was 16,899,505 tons. Of this quantity the Philadelphia and Reading Railroad and its many branches carried 4,694,604 tons from the Schuylkill coal region; one-twentieth of this product was shipped to westward consumers, and nearly 125,000 tons were used on lateral roads. The Lehigh Valley railroads shipped 3,660,551 tons; two-thirds of which came from the Hazleton, and one-fifth from the Beaver Meadow collieries. The Delaware, Lackawanna, and Western Railroads carried to the North 669,843 tons, and to the South 1,678,258 tons, amounting to 2,348,101 tons, an increase of 784,113 tons over 1869. The Lehigh Coal and Navigation Company transported by railroad and canal 2,143,134 tons, showing also an increase of 546,407 tons, over the previous year. This company obtained from the Wyoming coal region 1,247,889 tons; from the Hazleton Collieries, 312,324 tons, and from the Mauch Chunk Collieries 269,036 tons. Almost the entire of the quantities just named was forwarded east of the Mauch Chunk region, two-thirds being sent by railroad. The Delaware and Hudson Canal Company forwarded 2,364,673 tons, which exhibits an increase of 839,060 tons. The Summit Branch Railway Company shipped 4,490,101 tons, besides 77,410 tons by canal from Millersburg. From the Shewakins region there were shipped 489,314 tons, the Lackawanna and Bloomerby Railroad Company carried 275,720 tons, and the Northern Central 213,615 tons. In addition to the above enormous quantities, 487,184 tons of bituminous coal were carried by the Reading Railroad, and 313,922 tons of semi-bituminous coal by the Huntingdon and Brood Top Mountain Railroad. These



Last two amounts show that the total quantity of coal raised and shipped from the Pennsylvania coal mines during the year 1870 amounted to 17,690,611 tons.

#### NEW ROAD MATERIAL.

It has often been remarked that of all streets London streets are the dirtiest in wet weather, the dustiest in dry; and for nine months out of the twelve not only positively dangerous to travel upon, but damage our horses, carriages, and even our temper to an alarming extent. Who has not seen frequently horses thrown down, and almost cut to pieces, from the looseness of the material of which our roads are made?

It is well known that hitherto the principal material used in making and repairing is the broken granite from the quarries of Guernsey or those of Leicestershire, and the very nature of it is quite sufficient to account for our discomfort. For building purposes, perhaps, granite is the most lasting, under a condition of rest; but when placed on roads, and subjected to the crushing and grinding operation of wagon-wheels, it quickly becomes reduced to powder, and having no cementing properties is in dry weather blown into our houses, or converted into mud in wet, bespattering our persons, if we are unlucky enough to be obliged to walk. It is not our present intention to remark upon the asphalt which has been laid down in one or two of our principal thoroughfares, as its first cost will deter most of our vestries from adopting it, and time alone can show its value. But in the meantime attention may be called to the fact that we possess, to an almost boundless extent, a material in every degree superior to granite. This is the Ironstone slag, and for the benefit of our readers not connected with the iron trade, we may slightly digress to explain what this is.

In the production of pig-iron from the raw material there is a large amount of dross, which flows from the surface of the molten metal in the furnace, and is received in what are called "slag boxes;" these when filled are drawn away and emptied to waste, and this material when cold assumes a pale French grey colour, and is what we now designate "Ironstone slag." From an analysis now before us there can be no doubt of its cementing properties—its greatest value; and the fact that in Belgium and France it has been moulded into an almost endless variety of forms, both for building and road-making, should be sufficient to convince us of its utility. For the formation of a road it should be broken into paving blocks, about 6-in. cube, and packed loosely together, covered with the same broken to a 2-in. gauge about 4 in. deep, or 10 in. together; afterwards to be well watered, and rolled together to crush the whole, thus forming a road which for cleanliness and comfort cannot be surpassed. For simply repairing an existing road it is sufficient if laid on 2 in. thick.

We believe an effort has been made to introduce this material into London, and that two years ago the upper portion of Park-street, Grosvenor-square, was coated with it, 2 inches thick, simultaneously with the coating of the adjoining portion with Guernsey granite, and the satisfaction it has given is such as to induce the vestry of St. George, Hanover-square, to extend its use; and we understand that at the last meeting of the vestry of St. Pancras it was decided to use it for the repair of the roads in that parish, and accordingly accepted the tender of Mr. COULTHARD, C.E., of Duke-street, Westminster, for the supply. Since its introduction, in 1868, Mr. COULTHARD has devoted much attention to it, and we shall be greatly indebted to him if he succeeds in giving us a road that we can with anything like comfort travel upon.

#### COAL-CUTTING MACHINERY.

The many efforts made during the last 12 or 14 years to introduce into the Yorkshire and other mining districts machinery for the economical and safe working of coal have either been complete failures, or have met with very little success. This to some small extent may have been caused by the machinery not appearing satisfactory to coalowners, as well as from their fear of introducing any new mode of working that might turn out a failure, and so give their men what they would look upon as a victory, and one they would not be slow in showing or turning to their advantage. There is, however, at the present time every appearance of a most decided change, and at no previous period have coalowners shown such a disposition to have tested the most recent mechanical appliances and machinery adapted for the getting of coal, with the view of adopting them, or have the prospects of inventors appeared more promising. As compressed air is admitted to be the best motive-power for machinery working in mines considerable improvements have been lately made in that direction, more especially by Messrs. S. Firth and F. Hurd, in the application of a differential lever to machinery for compressing air.

At the present time either four or five of the pick-machines, with the latest improvements brought out by the inventors, Messrs. W. and S. Firth, of Leeds, are being made for the pits belonging to the West Ardsley Coal and Iron Company, one of which has been most successfully worked for the last three years at Tingley Colliery. The pick, about 75 lbs. weight, with about 74 blows per minute, undercuts to a depth of about 3 ft. 9 in., doing about 20 yards in an hour.

Messrs. Hurd and Firth's machine, which has for some time been worked at the Wharfedale Colliery, near Sheffield, and with most satisfactory results, has been introduced into Lancashire, and the patentees have orders for several of them at present on hand. The machine has undergone some material improvement since first introduced by Mr. Hurd, the original inventor, and whose success has been of a marked character. One of the principal changes or improvements consists in the connecting a series of cutters to an endless wire-rope, instead of to the links of a chain, as in the first instance, and in driving the rope by a friction-pulley, with wedge-shaped segments fitting between discs, and on a central circular wedge. The demand for those machines, with the improved air-compressing machinery, by the same patentees, is increasing, and they are being adopted in different districts throughout the country.

On visiting the Wharfedale Colliery, on Wednesday, we found Mr. Hurd's machine at work, going along steadily, and cutting at the rate of about 15 yards an hour. Nothing could be more satisfactory than the manner in which the machine traversed over the face of the coal, and Mr. Platts, the undersurveyor, spoke in the most unqualified terms of its great success.

Of the machines which are likely to be tested shortly may be mentioned that of Mr. C. Bartholomew, one of the partners in the Wombwell Main Colliery, and which is intended to act as a saw in getting the coal. From Mr. Bartholomew's reputation as an engineer, there is every reason to believe that the machine will be a good one, and we hope to be present at one of its trials. Mr. Donisthorpe, of Leeds, has recently perfected his patent for a coal-cutting machine, and he is sanguine it will be a great success. Mr. Donisthorpe is one of the oldest patentees in connection with coal-cutting machinery. One of his machines was worked at Pope and Pearson's colliery, near Normanton, and with very satisfactory results.

A new machine is this week being put down at the Hasland Colliery, of Mr. G. Senior, situated a short distance from Chesterfield. Mr. Senior has recently cleared two pits which were abandoned a few years since from an eruption of water, and having been so far successful he is determined to try machinery in the getting of the coal. The machine, which is patented by Mr. Gillott and Mr. Copley, has been manufactured under the superintendence of the former, at the establishment of Mr. Barraclough, of Barnsley. The invention consists of a horizontal revolving wheel, or disc, with a series of cutters mounted on the periphery, the cutters being made to cut outwards, or from the bottom of the groove or undercut to the face of the working, whilst the body of the machine takes its bearing against the face in order to resist the strain of the cut. The whole is mounted on a suitable carriage, made sufficiently low to admit of the cutters getting well down to the bottom of the face for the purpose of "holing-in" at the bottom, if necessary. The cutter-wheel is rotated slowly but forcibly by the aid of the spur, bevel, and worm-gearing, carried on the main frame. Mr. Gillott, as well as Mr. Senior, appear confident that the machine will fully realise all their expectations, and be found all that need be desired in an instrument for cutting coal or other mineral. As coal-cutting machinery has scarcely as yet been tested to any extent in Derbyshire, the trial of that introduced by Mr. Senior will be looked upon with no ordinary

interest, and we hope to be able shortly to state from personal observation the result of its working.

The above facts will show that great progress has been made of late, and is now being made, in the production of machinery in every way adapted to getting coal more economically and with more safety than by hand. Amongst the other advantages of machinery worked by compressed air is that of improved ventilation at the working faces, as the exhaust air gives a constant supply of fresh air, the coldness of which reduces the temperature. Another very important item, which ought not to be overlooked, is the great saving in the waste made by the machine in cutting when compared with that produced in holing by hand. It has been computed that in the finest seams of coal the waste made in working by hand is fully 12 per cent., and most of which is worth little or nothing, so that the taking the quantity of coal produced in 1869 at 107 millions of tons, the waste would be more than 14 millions of tons. On the other hand, the waste made by the machines at Ardsley and other places have been estimated at about 4 per cent.,—a saving of such vast importance in favour of the machine that renders comment unnecessary.

#### IMPROVED SAFETY-LAMP.

A miners' safety-lamp, possessing several novel features, and designed for the burning of paraffin oil, has just been invented by Mr. WILLIAM SIMPSON, of Battersea; and from the report made upon it after practically testing it in a mine, it is probable that with some trifling modifications in detail, it will thoroughly answer the purposes for which it is intended. The oil-chamber is of annular form, the passage through the centre being carefully covered at the bottom with wire-gauze. A bridge across the upper end of the opening connects the oil-vessel with an ordinary flat-wick paraffin burner, provided, however, with an automatic extinguisher, to prevent the exposure of the flame by the opening of the lamp. This extinguisher is extremely simple, consisting of two small plates, which, whilst acted upon by the spring provided for that purpose, cover the wick and wick-tube; but whilst the lamp is in use this spring is held back by a catch in such a manner as to be at once released upon any attempt being made to unscrew the lamp top. The vastly superior light and greatly increased economy of paraffin oil, as compared with candles, is so well known that it need not be referred to; and if Mr. Simpson can succeed in introducing his lamp into collieries, colliers will have no excuse for opening their lamps to increase their light. The new lamp, as at present constructed, is 18 in. high and 4½ in. diameter, and is provided with a tripod 2 ft. high, in which the lamp is suspended, in order to prevent the possibility of it assuming anything but a vertical position when stood upon the floor of the mine; future specimens, however, will be made 4 inches shorter, so as to approach more nearly the size of the lamps at present in use. The price of the lamp and tripod complete will not exceed 8s. 6d., which is rather under than above the price of a good Stephenson, so that expense will be no bar to its adoption.

The lamp has been thoroughly tested by Mr. J. Morton, mining manager to Young's Paraffin Light Company, Glasgow, and his report upon it is decidedly favourable, although he suggests several modifications, which he considers would improve the value of the lamp, which he states he found to have several advantages and also several serious objections. He first examined a working-place with a Davy lamp, and found it to contain fire-damp along the roof, 1 foot deep, about 6 feet in length, and 4 feet in breadth. He afterwards took the paraffin lamp, and could not by any means detect fire-damp, on account of the extra height from the flame to the top of the lamp, it coming in contact with the roof, before the flame was allowed to come in contact with the fire-damp. He then put the two lamps alongside of each other, and found it to have no visible effect on the flame, whereas a naked light put alongside of it was completely extinguished, thus showing to what advantage it could be carried against a strong current of air with perfect safety, although the air might be mixed with a large proportion of fire-damp. He is, therefore, of opinion that it is a first-class lamp, in fact, superior to anything that he has seen, for workmen who might be required to work in a place, containing a small proportion of fire-damp, as owing to its superior light they could perform their work with nearly as much freedom as the flame, and with comparatively perfect safety, and would be of invaluable use in any large mine, where nothing but safety-lamps were used by the workmen, but it is not at all suitable for a fireman examining the working faces of a mine, owing to its deficiency in detecting fire-damp in the small cavities and fissures of the roof, and could not be used for that purpose. If there was any possible way of conducting the flame on a white heat to the top of the funnel so that it would come in contact with the fire-damp at that point, it would obviate the most serious objection, and altogether change the qualities of the lamp—in fact, would make it superior to any safety-lamp at present existing.

Of the great illuminating power of Mr. Simpson's lamp there can be no question; and as he appears to have already succeeded in removing the defects, without lessening its advantages, it may be anticipated that more will soon be heard of it.

#### NEW TUNNELLING-MACHINE.

Shall the mining and engineering world ever be so blest, beyond what it now deems possible, as to come into actual, tangible, useable possession of a veritable tunnelling-machine? We do not mean a mechanical drill of any design or principle, but a machine which shall fairly grapple with and overcome the difficulties of the question, and work its way in the strength of its own arm into any and every kind of rock at a pace many times what is possible to hand labour and powder, or has hitherto been attained by mechanical drilling and powder. We had almost despaired, but our hopes revive as we record what took place last Tuesday at a chalk quarry near Maidstone, in the presence of the Duke of Sutherland, Capt. Tyler, and Messrs. C. W. Eborall, E. A. Bernays, Arthur Dean, W. W. Fisher, and other scientific and practical men. They were gathered together to witness the operation of J. D. Brunton's Tunnelling-Machine. One of the reasons for setting it to work in this place was that its applicability for driving the proposed Channel Tunnel might be fully tested and finally established.

The investigations made by Mr. Hawkshaw, M. Thomé de Gamond, and others, warrant the belief that the course of a submarine tunnel as marked out by them would pass entirely through the grey chalk, and therefore was this grey chalk quarry selected, and its use kindly granted by the proprietor, Mr. W. Lee.

Without the help of an engraving it would be difficult to convey to the reader, who is as yet unacquainted with the machine, any correct idea of its principle and mode of action. All its motions are circular and continuous, and herein lies the secret of its perfection and success. There is no jar, or jolt, or concussion, but smooth revolutions in combination with one another. The massive central revolving screw, the quickly revolving cutter bearers, the cutters themselves, all revolving. The action may be described as an incessant splitting away of chips, about 1 inch thick, from the face of the end, the edge of the cutters describing a circular path from the circumference to the centre of the tunnel, and the actual result is a catarrh of chips delivered by the machine at the rear, at a height sufficient to fall into wagons placed to receive them. Thus there is no hand-labour in the whole operation, and the progress is wonderful. Nearly 4 ft. in the hour was attained on the day named, and as by a slight modification of the machine 2-in. chips might be cut instead of 1-in., 8 ft. an hour might be calculated on; indeed, in the opinion of those who witnessed the operation, 3 yards an hour was considered quite a practicable rate of progress in the prosecution of the Tunnel under the Channel.

The structure of the machine is such that there is plenty of room in the tunnel (which is 7 ft. diameter) to stand by its side, or to sit above its central screw, within a distance of about 3 feet from the face, from whence the working is clearly visible. The Duke was so placed for a considerable time, and made himself perfectly acquainted with the working of the machine. The opinion expressed by all present was that the machine was an unquestionable success for chalk, and any of the softer kinds of rock.

For colliery owners this will be good news; but we should like to see the machine in the hard rocks of our lead, tin, and copper mines, where it is much needed. Mr. Brunton tells us that this also he hopes before long to accomplish—that there is but one obstacle yet to be

overcome before reaching so desirable a result, and that it is in a fair way even now of being surmounted. We can only say that if Mr. Brunton achieves over the harder rocks a triumph as great as he has over the softer, the whole future of mining enterprise will be changed—immeasurably for the better.

#### EXPERIMENTS ON STEEL.

For some time past a committee of civil engineers has been engaged in testing the resistance of steel produced by several of the principal manufacturers to tension, compression, transverse strain, and torsion (the necessary experiments having been made by Mr. DAVID KIRK-ALDY under the instructions of this committee), and the results have now been published. Both funds and material were willingly placed at the disposal of the committee, and every care was taken that the samples tested should represent the best marketable quality of steel ordinarily made by each of these manufacturers. The results obtained, both with Bessemer and crucible steel, are recorded in a series of elaborate tables, which will prove of the utmost utility to those employing that metal for constructive purposes. Tested by tension, the breaking stress of hammered Bessemer steel, such as is used for tyres, varied from 29·06 tons per inch to 40·71 tons per inch; hammered Bessemer steel, such as is used for axles, varied from 28·86 to 36·80; hammered Bessemer steel, such as is used for rails, varied from 28·51 to 35·68; rolled Bessemer steel for tyres could bear a breaking stress of 32·09 tons per inch; for axles, 32·22; and for rails, 30·74 and 32·61 tons per inch respectively. The Bessemer steel was in no material degree inferior to crucible steel; for with hammered crucible steel for tyres the breaking stress varied from 30·69 to 40·57; for axles, from 35·72 to 48·13; for rails, 38·14; and rolled crucible steel for axles gave 30·62 tons per inch breaking stress. The ratio of the yielding to the breaking stress is in round numbers from two-thirds to three-quarters.

The committee has also been favoured by the Secretary of State for the War Department with a statement of a series of experiments made for the purpose of ascertaining the additional tensile strength resulting from tempering steel in oil and various temperatures by the officers in charge of the Royal Gun Factory. A record of these is given in the book, as well as of some further experiments on tension and compression of long bars, and for ascertaining the amounts thereof by measuring directly from the bar in order to obtain very accurate results. As to the amount of reliance that may be placed upon the experiments, it need only be stated that the committee consisted of Messrs. W. H. Barlow, George Berkley (who has very ably performed the duties of secretary), John Fowler, Douglas Galton, C.B., and J. Scott Russell, whilst the actual experiments were made by Mr. D. Kirkaldy, to give the fullest confidence that every detail has been carried out with the utmost care and ability. The committee take the opportunity to invite gentlemen who have made careful experiments upon the properties of steel to favour them with the results, and it is cordially to be hoped that the invitation will be freely responded to.

#### REPORT FROM SCOTLAND.

Jan. 25.—The firmness with which makers of Pig-Iron are holding to their prices is causing a great portion of their make to go into stock; and of the transactions which take place on 'Change no considerable portion has been taken from store this month. The tendency of the variation in price—which embrace the limited range of 1½d. to 2d. per ton—is towards an advance; and if peace were only once attained prices would speedily run up 2s. or 3s. a ton. The languidness with which the market closed last week was imparted to the opening business of this week; and, although there is not much doing, yesterday's transactions were up to 5½s. 6d. cash paid, but the close was a fraction easier. To-day the market was brisk, and a fair business was done at 5½s. 7d. to 5½s. 8d. cash, and 5½s. 10½d. to 5½s. 11d. one month, closing buyers 5½s. 7d. cash and 5½s. 10½d. one month, sellers 1d. per ton higher. No. 1, g.m.b., 52s.; No. 3, 51s. 3d.; makers' iron, No. 1, Gartsherrie and Coltness, 60s.; Summerlee, 58s.; Shotts (at Leith), 56s.; Langloan, 55s.; and all Eglinton (at Ardrossan), 52s. 6d. [Note.—By a mistake in transcribing the figures Summerlee was misquoted in last two numbers—should have been 58s.] Of the shipments of pig-iron from the Scotch ports 3430 tons were foreign, and 5105 coastwise—8535 tons, against 9918 tons in the corresponding week of last year. This makes a deficiency on the shipments of the year to date of 8166 tons. The furnaces in blast are 127 to date, being two less than at the same time last year.

With regard to Manufactured Iron it is difficult to say a word, quotations being nominal, and the whole workers on strike, with one or two exceptions. At this port we are completing some small shipments of fencing-bars, small rods, merchant bars, and piping, &c., at former quotations, but whatever new work is being booked it is on conditional terms. Rivet and cut-nail manufacturers are busy, and are enabled to keep themselves going out of their own or makers' stocks.

Last week, in a postscript, we were enabled to note the likelihood of an arrangement being come to whereby the strike amongst the puddlers, millmen, and their assistants would be brought to a close before the end of the week, especially on account of the willingness of the millmen to accept the drop of 6d. a ton in the meantime. Into this arrangement the puddlers would neither be reasoned nor coaxed, and as the millmen had promised to make common cause with the puddlers, some time ago, they think they are now bound to stand out with the puddlers for a demand which their reason condemns. The Govan people, and two firms in the Coatbridge district, are endeavouring to effect a settlement for themselves, on terms of their own. This has been done at the Blochairn works, where the hands necessary for managing two large plate-mills, and their assistant heaters, have been arranged with, and are going on with their operations as usual. We believe we have also ground for saying that some of the more intelligent millmen are so working the switches as to draw off those who are persuadable from the strike line on to the work line, so that there is some good hope of this question being adjusted before much evil is done. Since the date of our last report there have been daily meetings of those on strike, at Coatbridge, Holytown, Glasgow, &c., and not a few fiery denunciations uttered, with only this object accomplished, that the men are now in possession of the definite assurance of the masters that they are determined to enforce the reduction of 6d., or, as was stated, sweep away the 6d. given by the arbiter, while they were willing to allow the other 6d. to rest in abeyance until such time as the North of England arbitration is settled. Regarding the millmen, the masters were still resolved to reduce them 5 per cent. At the meeting held in Glasgow, on Monday, Mr. Kane, of the North of England Association, and Alexander McDonald, miners' agent, were present. The former advocated the introduction of the English system of arbitration into Scotland, and recommended the men to go hand in hand, and this would probably be the last look-out for many a day. Mr. McDonald thought the men should look elsewhere for employment—Wales, England, even across the broad Atlantic, rather than submit to the selfishness of the masters. This injection of naphtha into the flames is not likely to aid the waning ardour of those who are feeling cold at the fire of their own kindling.

The Coal Trade is very buoyant, and the continued severity of the weather is adding to our home and coasting demand. The prices continue as last quoted, the briskness experienced keeping them very firm and steady. The shipments for the week embrace 10,375 tons foreign, and 33,615 tons coastwise = 44,990 tons, against 26,052 tons in the corresponding week of 1870. These figures bring up the total shipments of January to 105,624 tons, as contrasted with 92,767 tons in the same month last year. A series of thefts having been proved against Henry Smith, bill-clerk to Robt. Gray and Co., coalmasters, Westmuir, and also against James Lindsay, coal dealer, and Carter, Parkhead, an accomplice, the former was sentenced to thirty days and the latter to sixty days imprisonment, as the greater culprit of the two.

The Iron Ship Trade, with suitable weather, would be very brisk, the Clyde builders being well supplied with orders for the spring. On Saturday last there was launched from Fairfield a powerful iron screw-steamer, of 2780 tons, British measurement, and 600-horse power, for the Royal Mail Steam Packet Company, of London. She was named the Tagus, and will run between London and the West Indies. Another steamer was launched at Whiteinch on Monday, for the London and Leith passenger trade, of 1100 tons, named the



Canal, was launched at Linthouse, named the Glensannox, of 1500 tons. The same afternoon a screw steamer of 250-horse power was launched at Port Glasgow, named the Strathclyde. She will be employed in the Eastern trade, and has accommodation for about thirty passengers.

We regret to notice in the bankrupt list the Gartcosh Iron and Steel Company, carrying on business in Glasgow and at Gartcosh, near Aldrie. The individual partners are named as James Morris, James Young, and Benjamin John Blackhurst.

**NOVELTY IN PUMPING.**—There has been recently introduced at Halbeath Colliery an improved system of driving pumping machinery for mines, which is likely to attract attention, as it has proved very successful. The object is to provide efficiently for the great variation of strain in heavy pumping by bell cranks. This is attained by applying the patent Corliss system of steam engine, made by Mr. Douglas, of Dumbukier Foundry. The special peculiarity is that this engine supplies itself at every movement with the exact amount of steam required to overcome the resistance at the time, and thus ensuring the greatest economy of movement and the most economical use of steam and fuel. The pit to which the plan has been applied is about 70 fathoms deep, and has 16-in. pumps, with heavy water; the engine cylinder is 36 in. in diameter, and 4 ft. 6 in. stroke, so that the principle is well tested.

#### REPORT FROM THE NORTH OF ENGLAND.

**Middlesbrough, Jan. 25.**—There is very little that is new or interesting to communicate this week, business generally seems to be somewhat more depressed than it has been for the past few weeks. Enquiries for all classes of iron are fewer, and prices in many instances are also less firm. The attendance on 'Change at Middlesbrough was but thin. For pig-iron the demand was light, considerably less, indeed, than might have been expected for the time of year. Consumers in many cases have either heavier stocks on hand from which to work than was generally thought, or they are without orders to cause them to be immediate purchasers, and as in the minds of a good many consumers there exists a belief that the present rates for pig-iron will "go down," no doubt as little iron is being purchased by them as will barely satisfy present requirements. Stocks in makers' hands are reported to be rather largely increased since the commencement of the year, and although there is no apparent disposition on the part of makers to press their iron upon the market—a course that would immediately tend to reduce the present list prices—the rates paid during the past month were not so easily obtained yesterday. The average quotations are for No. 1, 50s.; No. 3, 46s.; No. 4, 45s., net cash at makers' works, or f.o.b. on the Tees; for four months' bill 1s. per ton more. There is a considerable falling off in deliveries by water to foreign ports, and also along the coast. The blast-furnaces in course of erection in the district are being pushed on to completion as rapidly as circumstances will permit, and some of them are shortly to be put in blast. The recent weather has impeded progress to a large extent, but wherever practicable the works are being proceeded with.

Rail manufacturers still complain of a want of fresh orders. Enquiries are slow, and makers are, by keeping their mills running good time as at present, fast reducing their orders. In some yards large stocks of rails are to be seen awaiting instructions for delivery. More than one of the large rail-making firms of the neighbourhood are reported to be pretty well off for work, but we believe, as a rule, that the rail order-books are comparatively bare. Prices, as may be expected, likewise remain bare. A few Scotch enquiries, however, for plates are being received: generally the plate trade is steady, and prices firm. Shipbuilding on the Tees is active, and engineering establishments are also full of work. Foundry orders are somewhat scarce, and prices are down to a comparatively low point.

The Britannia Iron Company's works, at Middlesbrough, are beginning to present a more complete appearance. The erections are being vigorously carried out, and a start about May or June is expected. At Messrs. Oswald and Co.'s new works, which were laid out a few months ago, near Hylton Castle, on the Wear, a plate-mill has been started, and other portions of the works are shortly to be completed. At the end of last year Mr. J. C. Hopkins resigned the office of Admiralty Commissioner on the Tees Conservancy Board, and Mr. H. W. F. Bolekow, M.P., of Middlesbrough, has been elected in his stead. A meeting of the Council of the Cleveland Institute of Engineers was held yesterday, in the board room of the Exchange, Middlesbrough, when it was unanimously resolved to invite the Institution of Mechanical Engineers to hold their next annual meeting in Middlesbrough, in August.

#### TRADE OF THE TYNE AND WEAR.

**Jan. 26.**—The Export Coal Trade still continues extremely dull, owing to the long-continued obstruction to shipping caused by extremely stormy weather and severe frost. The demand, however, for house and other kinds of coal is excellent, and a large business has been done, most of the works being kept well going, and the prospect at present is certainly good. The iron shipbuilding and engine trades are generally very brisk, and foundries are also well supplied with orders. The demand for pig-iron is extremely good—stocks are low, and the make will be much increased shortly; but the demand for finished iron is only limited, and especially the rail trade is in a very dull state, although some good orders have been received on the Tyne lately, which will keep the works going some time.

A most lamentable and remarkable accident occurred on Thursday at the Wheatley Hill Colliery. This is a new colliery, late sunk in connection with the Thornley Colliery, by the original Hartlepool Coal Company. The total depth of the shaft is 129 fms. to the Main coal. The Five-quarter seam having been passed through 15 fms. above this. The workings in the Thornley Colliery are very extensive, and a junction was effected with these workings from the new winning at Wheatley Hill some three miles. The seam at Wheatley Hill is 7 fms. below the level of the seam at the Thornley Pit, and, consequently, a powerful pumping-engine, capable of lifting 800 gallons per minute, was erected at the new winning. It further appears that a large receptacle for water existed in a part of these workings—that is, the old workings in the Thornley Colliery—and it was arranged to drive a drift in a certain part of those workings, in order to run the water off gradually, and lift it by the pumping-power at the new shaft. One of the men, a hewer, was engaged driving this drift on Thursday, when it appears that he had thinned the coal so much that the pressure of water broke the remaining coal away, and a large body of water immediately rushed into the Thornley workings; but in this part of the workings fortunately no men were employed, and the Wheatley Hill workings being to the dip, as observed above, the water soon found its way into those workings, causing the greatest alarm and destruction. At the time when the accident occurred there were engaged in the workings at the new colliery thirteen men and eight boys, and it was with great difficulty that a part of them reached the shaft. When they did so Taylor, the deputy in charge, and who had been engaged in the north-west workings, was there also, but he rushed back into the workings where four men were employed, and fortunately succeeded in getting two of them out. All the men and boys now found (fourteen in number) ascended the shafts in the cage, and when they were drawn from the bottom the water reached their chests, so that they had a very narrow escape. When they reached the bank it was found that ten men and boys were missing, and as the water continued to rise rapidly, although both the pumping and winding engine were put to their full power, no hopes were entertained that any of them would now be recovered alive. The water continued to rise until it reached nearly to the Five-quarter seam, it being only 1 foot below that seam. And here we ought to remark that Mr. Burn, the viewer, had examined the workings in the Main coal, and left only a few minutes previous to the outbreak of water, and when this took place he was in the Five-quarter seam.

**UNEXPECTED RECOVERY OF TWO OF THE MISSING MEN ALIVE.**—From the time that the inundation occurred until Saturday night pumping operations were continued and persevered with, and dams were also inserted in the drift on the Thornley side, to prevent the flow of the feeders downwards, and the water was reported 40 ft. in depth at the shaft. About 3 o'clock the men working from the Thornley side fancied they heard a knocking from the side of the drowned workings, and this was soon found to be a certainty, and the Thornley men then rapped in answer. It was found that two of the men were alive, and only 50 or 60 yards from the Thornley men; but there was only an interval of 5 or 6 in. between the top of the water and the roof. The Thornley men plunged in, holding and perceiving hands, and encouraged the men who had been so long shut up by this subterranean flood to do the same, which they did, one named Regan, plunging in first, and the other, named Smith, holding on by his clothes. The leading Thornley man, William Brown, deputy-overman, soon got hold of Regan's hand, and both the lost men were speedily dragged through into dry ground. They proved to be Michael Regan, a married man, and John Smith, a single man; they were both much exhausted, but being furnished at once with dry cloths, and conveyed to bank, and afterwards taken home and put to bed, they speedily recovered, and were able to give an account of the perils and scenes they had passed through, which are truly appalling. It appears that after many struggles with the torrents of water, Smith and Hall set out towards the Thornley Works, although they were entirely in the dark, their lamp having been extinguished, and in the way met with Regan and Bell, and the latter encouraged them to press towards the Thornley workings, and this they did until they arrived at a point where the water reached the roof, and this point they found it impossible to pass. However, they found a "couch," or stage, a little higher than the ordinary gallery, and having placed a wood brattice in the place the four men sat down. Smith tried hard to keep awake, and also to keep the other men awake, but ultimately was overcome by sleep himself, and when he awoke he found that Bell and Hall were both dead, and shortly afterwards the two survivors were rescued as related above.

Another colliery inundation has also occurred at the Seaham Col-

liery, belonging to Earl Vane. At five o'clock on Tuesday afternoon eight men and two boys were employed in the south-east part of the colliery, about two miles from the No. 1 shaft, the seam dipping in that direction 22 fms.—that is, up to the point where those men were employed the total fall from the shaft is 22 fms. A man named James Roseby, one of the workmen alluded to, struck his pick through into some old workings, and immediately some water gushed out, at first only the thickness of a man's arm, but in a short time a mass of coal was broken away, and a great body of water rushed out. Roseby alarmed the other men, and all of them escaped towards the shaft, with the exception of two, a man and a boy, and it is feared that this man and boy are lost—that is, W. Candlish, 45, married, with six children; and George Charlton, aged 16.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

**Jan. 26.**—So far there has been no material movement in the demand from the various foreign countries, America excepted. The contracts which are coming to hand from the United States are increasing, and furnish considerable employment at the works. Unless, however, enquiries come from other quarters, the American demand, large though it may be, cannot long afford the amount of work necessary to keep the hands at all the large establishments of the district in anything like full time. Complaints in some parts of the district are already rife in regard to the scarcity of contracts, and there can be little doubt but that, if no improvement on the present state of things takes place shortly, it will be found necessary to place some of the hands on short time. Home transactions continue slow in nearly all descriptions, but more especially in railway iron. In regard to pig, it might be said that it has latterly been generally felt that some restriction must either be put on the production, which has for some time been large, or stocks would increase considerably. A change might very soon now, however, take place, which will render the demand for finished iron more equal to the large make of pigs, and prices, which have begun to evince less firmness, will yet be maintained. Plates continue in fair request. Bars remain quiet. The prospects of the Tin Plate Trade are rather uncertain just now, as the discontinuance of the war would belikely to affect the present demand considerably.

But for the continuance of the Franco-German war the Steam Coal Trade would, undoubtedly, have ere this been in a tolerably satisfactory state. The demand from the leading mail-packet stations remains about the same as previously reported, and the enquiry is, if anything, in excess of that of the corresponding period of last year. It cannot be said that quotations are remunerative, excepting where, from favourable natural circumstances, the coal can be worked cheaply. The House Coal Trade continues fairly active, there being an average enquiry on West of England and Irish account, as well as a brisk local demand.

Another proof is given that the expectations at least of the Iron Trade are good. It is understood that some important extensions are to be made at the Blaenau Ironworks. A new blast-furnace is about to be erected, which will give employment to a large number of additional hands. These works continue in a flourishing condition, and the dividend declared by the company for the last year indicates that the concern is prospering.

It is now pretty generally understood that the Nant-y-Glo and Beaufort Ironworks are in the market, and it is reported that the Blaenau Iron Company are in treaty for the purchase of the same. The reasons assigned for the property being disposed of are the advanced age of Crawshaw Bailey, and his partner's disinclination to continue in active connection with the iron trade.

The death has been announced this week of Mr. Townsend Wood, principal of the firm of Messrs. Townsend Wood and Co., iron merchants, and one of the principal figures of the Brecon Ferry Ironworks. The deceased, who had been actively connected with the iron and metal trades for many years, was much respected.

A pleasing rumour is current in the neighbourhood of Pontypool, it being understood that the Pontypool Tinworks and the Town Forge establishments, which have been idle for some considerable time, have been taken possession of, and that operations will shortly be resumed there.

An explosion of fire-damp, which might have caused very serious results, occurred at the Llwynypia Colliery, Rhondda Valley, on Monday. The pits belong to the Glamorgan Coal Company, who are generally known to spare no expense to render their collieries secure from accident of all kinds. On this occasion two men who were working by naked lights struck what is commonly known as a "blower." A large quantity of gas escaped, and immediately exploded on coming in contact with the lights. The men were seriously injured, but their lives were saved. The effects of the explosion were very severe, but owing fortunately to the excellent state of the ventilation of the pit it was completely confined to the immediate locality of the "blower." The results of the occurrence in every way speak well for the management.

The arrivals at Swansea include—Deerhound, from Charnal, with 755 tons of copper regulus, for Richardson and Co., Malda, from Caldera, with 255 tons of copper regulus, 210 tons of silver regulus, and 115 tons of silver ore, for H. Bath and Son; Eplion, from Bolivia, with 825 tons of nitrate of soda, for H. Bath and Son; Atlas, from Santander, with 392 tons of iron ore, for H. Bath and Son.

**A COLLIERY FLOODED OUT AT WREXHAM.**—The celebrated Wrexham Colliery, which is situated at Rhosddu, about a mile from Wrexham, has been drowned out, or "flooded out." The colliery was commenced about three years ago, and already upwards of one hundred thousand pounds has been invested in the enterprise. It is only a few weeks ago since there was a demonstration, in consequence of having reached the Main coal, as it was thought, in a very short time, some 90 or 100 workmen would be employed, which would give great impetus to the general trade of the district. There are two pits sunk, one being about 35 yards deep, and although every perfection of engineering skill has been applied to the working of the shaft, the water broke in, and now within about 15 yards of the surface, thus throwing out of employment 150 and 200 men. Fortunately no lives were lost. What time it will take to pump out this volume of water, or what damage will have been done to the pits, is as yet beyond calculation, as the pits are lower than the surrounding collieries, and situated at the foot of the Brecon range of Welsh mountains.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

**Jan. 26.**—The Iron Trades are quiet. The uncertainty which attends the issue of the war and of the Black Sea Conference is exercising an adverse influence on the trade. The large capitalists will not enter into any extensive engagements so long as it remains uncertain how long war will last, and what future complications may result from the unsettled state of politics in Eastern Europe. The news of negotiations having been commenced created a hopeful feeling at the meetings at Wolverhampton and Birmingham, but as yet the news is very vague, and the result very uncertain. Pig-iron continues in good request, and steady at the 2s. 6d. advance established at quarter-day. Present quotations are as under:—Common forge cinder, &c., 2f. 12s. 6d. to 3f. 2s. 6d.; mine pigs, 3f. 12s. 6d. to 3f. 17s. 6d.; hydrates, 3f. 15s. to 4f. 5s.; foundry, common, 2f. 17s. 6d. to 3f. 7s. 6d.; ditto, best, 3f. 12s. 6d. to 4f. 2s. 6d. For the commoner varieties, however, these prices are not very strictly adhered to. Ores are in good demand at low rates, and the consumption of foreign varieties is steadily increasing. Orders are mainly confined to the smaller sizes for ordinary use, and short time is rather general. The business of Walter Robinson and Company, Gospel Oak Ironworks, has passed into other hands. Mr. Robinson has hitherto conducted the business, the works being devoted to the manufacture of sheet-iron, for which the firm have attained a good name. The circulars announcing the change, state that Mr. Lee, of London, will continue the establishment under the style of the Gospel Oak Iron and Galvanised Iron Company. The business will include the manufacture of sheet-iron and wire in conjunction with that of galvanised iron, as carried on up to this time by Mr. J. M. Clark, at the Mitre Works, Wolverhampton. Mr. Walter Robinson will settle the accounts of the old firm of W. Robinson and Company.

A fatal explosion at Hednesford, at one of the pits belonging to the late Hednesford Colliery Company, and lately purchased by the Cannock Chase Colliery Company, was the subject of enquiry before the district Coroner at Hednesford on Friday, in connection with the death of a youth, named Joel Chilton. Two other persons were badly burnt. In reply to Mr. Baker, the Government Inspector, it was stated that the ventilation was very good, as a rule, but that it was irregular at times, and that on the morning of the explosion the overman four times examined the waste for gas. Foul gas was, however, found in the broken roof. It was acknowledged, in reply to Mr. Baker's questions, that "Fire" was written up in No. 8 stall by the night fireman on Tuesday night to show that gas had been found, but the workmen thought it was out of their reach, and, therefore, used candles instead of lamps. The boy's father said he considered the ventilation as good as it could be, and did not attach blame to anyone. The jury found that the deceased was killed by an explosion of foul gas, but there was no evidence to prove how it was fired. They recommended that for the future safety-lamp only, and not naked candles, should be used in the shallow coal at No. 9 Pit. Mr. Brown, who attended as the representative of the company, promised that the recommendation of the jury should be carried out.

The Government have been charged with employing persons at Woolwich in violation of the Factory Acts, and at Walsall the other day this was pleaded in extenuation of similar offences by manufacturers of saddlery. Mr. A. Stanley, buckle-maker, was charged in four cases with employing females and young persons after seven at night. It appeared that offence occurred shortly before Christmas, and that the persons themselves had asked to be allowed to

work over-time, so as to make a little extra money for Christmas, and the sub-inspector was strongly urged to accept payment of the costs, or at least, the penalty in one case, but he was inexorable, and four penalties of 12 each and costs were imposed, and a like penalty in a case against another Walsall firm. The pinch is perhaps most severely felt from the fact that so many are exempt from any restrictions whatever.

**CANNOCK CHASE.**—The Cannock Chase Company have just completed another pair of pits, which are now being opened out for getting coal. The company commenced some years ago with the sulphur coal, that being the first from the surface at their first pit, but by sinking in the direction in which the measures dip they have met with others, such as are found near Essington, but the coals at present worked are the shallow, deep, and Cannel coals. This company appears to take a laudable interest in the welfare of their workpeople, and it is pleasing to see what a little colony has sprung up around the works. Many of the workmen (there are about 2000) live in houses they have erected for themselves, by means of Building Societies. The houses are of a tasteful design, so far as the architecture is concerned, as they are uniformly of a square, packing-box looking shape, each standing by itself, in most instances, and looking as ugly as a thing all direct angles can be imagined to look. It is gratifying, nevertheless, to find the men displaying the forethought and prudence necessary to construct them. A new church has been built, which is well attended, and the schools also. We are glad to learn that something is being done by way of night schools. Mr. McClean, M.P., one of the chief proprietors, has expressed a wish that the boys and others who are employed in these collieries shall have an opportunity of becoming acquainted, by means of night schools, with those branches of education which bear so intimately upon their duties and responsibilities as workers in and managers of coal mines. And Mr. Brown, the very able manager of this company, has expressed his anxiety to render his best endeavours to carry out Mr. McClean's wishes in this respect, and to do so in a way he can in what he knows to be an important work. Mr. Brown has undertaken to explain, by means of a series of lectures in the school-room, the various responsibilities of those who are entrusted with the management and working of collieries in the various departments, and how they can improve themselves. The company have also agreed to cultivate the 2000 acres they hold, and eight steam-ploughs are immediately to be set to work to break up the virgin heath, which has never yet been disturbed.

The Dudley Correspondent of the *Wolverhampton Chronicle* writes:—

There continues a large demand for thick coal, and though the output is very great the requirements of trade cannot be satisfactorily met. A good deal of discussion is taking place just now between our local scientific men on the question whether or not any coal lies beneath the Hunsley, or what is otherwise called the Great Western boundary fault and the Shropshire coal seam. Some argue that there are evidences of a great amount of denudation having taken place in this area soon after the deposition of the coal measures, and previous to the formation of the Red Rocks, and, as a consequence, that little if any coal is to be met with; others contend that if the western boundary was a "clean cut," or a succession of "clean cuts," within a short distance, it leads to the conclusion that the South Staffordshire coal field was far above its former level, leaving a part of the coal measures formerly on level with it far below it on the western side of the fault, were they are still covered by immense thickness of Permian rocks, and the bed comprised in the New Red Sandstone series, whilst denudation had brought to the surface of the earth down to the level of these series of coal measures and placed them within easy reach. This difference of opinion will not be solved until by some means or other a trial shaft or bore-hole is put down between the two fields, and the sooner this is done the better. We stated a short time ago that the Thick coal in the neighbourhood of the Salt Wells, Brierley Hill, and Hunsley, was being rapidly exhausted, it became a question where our future supplies for the various works and for other purposes are to be got from. We well remember the time when a person might have walked along the turnpike road leading from Brierley Hill to Dudley, a distance of three miles, over a bed of thick coal in its virgin state, with a considerable area of coal also on each side the said road, but now it is nearly exhausted, and in a few years the coal up to the present known boundary of the district referred to will be cleared out.

Hematite ore is much higher in price and the local manufacturers are, therefore, compelled to depend almost exclusively upon supplies of ironstone that can be obtained from the district. Native ironstone is now very limited in quantity. The mineral statistics published by the Geological Survey show that in 1869 only about 350,000 tons of clay ironstone was raised in South Staffordshire, which is only about half the quantity that was extracted two or three years ago. When it is considered that the make in the district cannot be much less than 550,000 tons per annum, for which 1,250,000 tons of ore will be required, it will be seen that the local supply is now relying very largely indeed upon ironstone from other parts of the country. North Staffordshire is now sending very large quantities of calcined clay iron ore and of hydrated hematite. Northamptonshire, Oxfordshire, and Leicestershire are also supplying oolitic stone, and hematite is brought in from the neighbourhood of Bristol, North Wales, Barrow, and elsewhere. The stocks of pig iron are comparatively low now, and should the manufactured iron trade prove at all active, it is clear that the demand for pig iron will force up the price very quickly.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

**Jan. 26.**—There is no change to be noted with regard to the Coal and Iron Trades of Derbyshire and the adjoining county of Leicestershire. A steady business is being done in manufactured iron, whilst there is a very large output of pig. In coal a heavy tonnage is being sent to London, the rate having in no way interfered with the trade there. It is felt by the coalowners that the desire of those in South Yorkshire to have the rate as low as from Derbyshire is contrary to all reason. The principal collieries sending coal to London by the Midland are, at the very least, 30 miles nearer to that place than those in Yorkshire dependent on the Great Northern. The differential rate is 1s. 4d. per ton, which existed up to the close of last year, it is asserted is not too much for the difference in the distance. The Yorkshire coalowners have an advantage which nearly counterbalances that enjoyed by those on the Midland in being so much nearer to London—the coal raised by the former is much thicker than in Derbyshire. The well-known Barnsley seam is nearly 9 ft. thick in the collieries connected with the Great Northern, whilst the same seam in Derbyshire and at Shireoaks, and along the Midland route, varies from 3 feet to 6 feet. The colliery owners on the Midland also state that they have to pay more per ton to their workpeople for getting their coal, owing to the thinness of the seam, than is paid in South Yorkshire, whilst several mining engineers gave evidence sometime since that the advantages altogether in favour of the latter sending by the Great Northern was nearly 2s. per ton, when compared with the owners in Derbyshire sending over the Midland. In connection with that line, we may say it is now carrying a very large tonnage of ironstone from Northamptonshire to the neighbourhood of Chesterfield, and taking back coal for the blast-furnaces. Some of the ironmasters in the county of Northampton, it is said, are assisting in proving these measures there, as it is expected that coal will be found under the Permian.

The heavy branches of the Sheffield trades are now very active. The demand for war material is still brisk, and the fall of Paris is not likely to interfere with it. It may be said now that Europe is arming, and the retrenchment of the English Government during the last two years has given way, and in its stead we have been favoured with orders for heavy armour-plates and other warlike materials. Steel gun barrels, gun blocks, and similar articles are in good demand. Rails are being largely produced, and the iron rather more doing in files. The settlement of the dispute between the Sheffield steel makers and the American Government relative to the invoicing of goods to that country, has been completed in our favour, so that we may now look forward to an increase of business from that direction. Bessemer rails, tyres, and axles are in very good demand, so that makers are taxed to the utmost to keep pace with the demand. There is a fair trade going in some descriptions of cutlery, especially in the cheap sorts, for which German makers before the war had almost a monopoly. The foundries in the district are doing a steady trade.

The Coal Trade of South Yorkshire is in a healthy state so far as regards household quantities of which a rather increased tonnage is going to London. In steam coal there is not so much being sent, this being usually the quiet season. The opening of Paris, however, would no doubt be the means of causing a very large tonnage to be sent to France from the Yorkshire ports. Engine fuel for Lancashire is in very fair request, but prices are still low.

On Tuesday there was a meeting of the South Yorkshire Coalowners' Association at the King's Head Hotel, Barnsley. No business of importance was transacted, but it was stated that the line known as the South Yorkshire Coalowners' London Railway was being proceeded with, and that the deposit money required by the Act of Parliament had been duly paid. Confident hopes are entertained that the Bill, despite the great opposition it is likely to meet with from some of the leading companies, will be carried through the Committee of the House of Commons.

Mr. P. Casey, one of the secretaries of the South Yorkshire Miners' Association, has been nominated as a member of the Barnsley Education Board, and there is every appearance of his being returned.

A case of considerable importance, as showing the great evil of want of discipline in collieries, has been brought before the magistrates, by Mr. J. T. Woodhouse. Some short time since there was an explosion of gas in a colliery at Moira, and in consequence Mr. Woodhouse directed that in a certain part of the workings safety-lamps should alone be used; yet some lads, whose work was merely to take charge of the horses, and who could, therefore, have no excuse for their conduct, opened their locked lamps, and thus endangered the lives of some fifty persons. Fines of 12 each and costs were inflicted, and the magistrates stated that similar offences would in future be more severely dealt with. Mr. Woodhouse is entitled to the thanks of all colliers for prosecuting the matter, and it is to be hoped that every colliery official will, in similar cases, act with equal decision.

**HOW COLLIERIES EXPLOSIONS OCCUR.**—At the Barnsley Town Hall, Joseph Parker was charged with having a tobacco-pipe and three lucifer matches in his pockets while at work in the Luddhill Colliery, Wombwell, on the 18th inst. The case was heard by Mr. J. T. Woodhouse, who, after a short examination, said each man received a copy of the rules on entering the company's service, one of which stated that matches or pipes should not be taken into the pit, which was entirely worked with safety-lamps, except just at the shaft bottom. In that part of the pit where the defendant worked the gas was liable to be given off. Thomas Redgate deposed to examining some clothes in the pit on the 20th inst., in company with another man, when he found a tobacco-pipe and three lucifer matches in one of the pockets. He called the defendant, and asked him whose clothes they were. He replied they were his. Thomas Lockwood, who accompanied the last witness to search the clothes, corroborated this, and said he had seen the defendant smoke a pipe on his road home from the pit many a time. The Chairman, after consulting with the other magistrates, said







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**THE SANDYCROFT FOUNDRY AND ENGINE WORKS**  
COMPANY (LIMITED).  
Having recently executed a LARGE ORDER for complete MACHINERY, FURNACE WORK, TOOLS, &c., required for the EXTRACTION OF SILVER from the ORE by the BARREL AMALGAMATING PROCESS, are now enabled to UNDERTAKE such WORK with all the latest improvements.  
Prices and particulars of the above, and of every description of MINING ENGINES, BOILERS, FORGINGS, PITWORK, WATER WHEELS, CRUSHING and DRESSING MACHINERY, and MINING TOOLS OF ALL KINDS, may be obtained on application at the works of the company, Sandycroft, near Chester; or at their London office—  
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SAWING, PLANING, DRESSING, and ROCK-BORING MACHINES FOR SLATE.

WATER BALANCES, WATER WHEELS, WINDING AND PUMPING MACHINERY; and PLANT of every description for MINES or QUARRIES.

STEAM ENGINES—STATIONARY, MARINE, or LOCOMOTIVE. BOILERS AND GIRDER WORK.

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FORTY STEAM ENGINES, from 2 to 20-horse power,

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Cannel gas coal, 15,000 feet of gas per ton. Illuminating power of gas in standard candles, 32½ candles.

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## VALUABLE CORNISH MINING MACHINERY.

MESSRS. J. C. LANYON AND SON have FOR SALE a very

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80, 70, 60, 50, 30, and 24 inch PUMPING ENGINES

24 inch ROTARY ENGINE, with CAPSTAN;

22 inch ditto, with CAPSTAN and CRUSHER;

Several good BOILERS;

A large assortment of PITWORK of all sizes; STRAPPING PLATES, rolled and faggoted, all of which are secondhand, in good condition, and will be sold on very reasonable terms.

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WINDING ENGINES, STAMPING ENGINES, STEAM CAPSTANS, and

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PITWORK of all descriptions, and all kinds of MATERIALS required for

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The 80 in. is nearly new, and, with several of the other engines, can be guaranteed of superior make and modern design.

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MANUFACTURERS OF

PUMPING and other LAND ENGINES and MARINE STEAM ENGINES of

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May be SEEN AT WORK at HAYLE FOUNDRY WHARF, NINE ELMS,

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Parties requiring secondhand ENGINES, BOILERS, and MACHINERY

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STEAM ENGINE, also a 16-horse power, both equal to new, and guaranteed.

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PIT WINDING GEAR made at a short notice, suitable for Portable Engines.

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ONE 50 in. cylinder PUMPING ENGINE, with ONE BOILER.

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MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY

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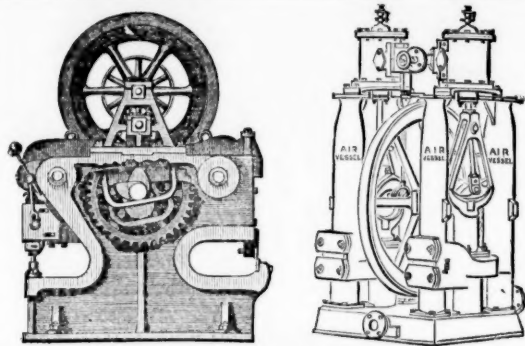
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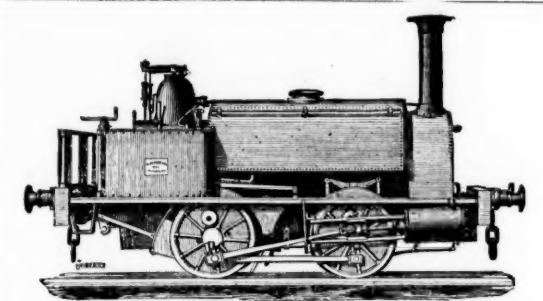
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PATENT FLAT AND ROUND WIRE ROPES

From the very best quality of charcoal iron and steel wire.

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## BLAKE'S PATENT STONE BREAKER, OR ORE-CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

This is the only machine that has proved a success. This machine was shown in full operation at the Royal Agricultural Society's Show at Manchester, and at the Highland Agricultural Society's Show at Edinburgh, where it broke  $1\frac{1}{2}$  ton of the hardest trap or winstone in eight minutes, and was AWARDED TWO FIRST-CLASS SILVER MEDALS.

It has also just received a SPECIAL GOLD MEDAL at Santiago, Chili.

It is rapidly making its way to all parts of the Globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States, and England. Read extracts of testimonials:—



*The Parys Mines Company, Parys Mines, near Bangor, June 6.*—We have had one of your stone breakers in use during the last 12 months, and Capt. Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.

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Our 15 by 7 in. machine has broken 4 tons of hard winstone in 20 minutes, for fine road metal, free from dust.

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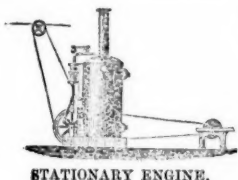
Your stone breaker gives us great satisfaction. We have broken 101 tons of Spanish pyrites with it in seven hours.

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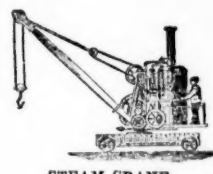
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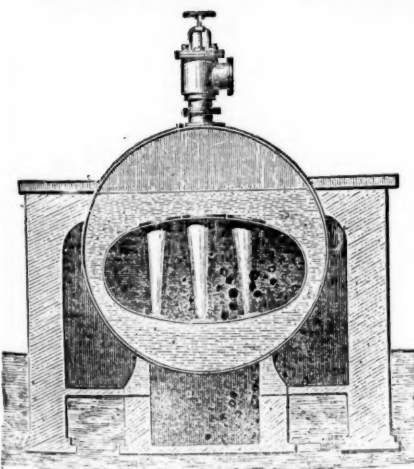
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STEAM CRANE.

## GALLOWAY'S PATENT CONICAL WATER TUBES FOR STEAM BOILERS.



Section of the "Galloway" Boiler, showing arrangement of back flues, the furnaces being of the same construction as in the common two-flued boiler.

The above TUBES are made with such an amount of taper as will allow the bottom flange to pass through the hole in the upper side of the boiler flue, which renders their introduction into ordinary fluid boilers a simple operation, and with the following advantages:—  
The POWER of the BOILER is CONSIDERABLY INCREASED, and the FLUES ARE MATERIALLY STRENGTHENED.  
The CIRCULATION of the WATER is MUCH IMPROVED, and UNEQUAL EXPANSION with its attendant evils, PREVENTED.  
LIABILITY TO PRIME IS LESSENE.

These Tubes have now been in use upwards of fourteen years, and above 50,000 are in work in various parts of the country with the best results.  
They can be fixed by any boiler-maker, but can only be obtained from the Patentees.

**W. & J. GALLOWAY & SONS,**  
ENGINEERS AND BOILER MAKERS

**MANCHESTER,**

Makers of Wrought-iron Parallel Tubes, 40s. p. cwt.

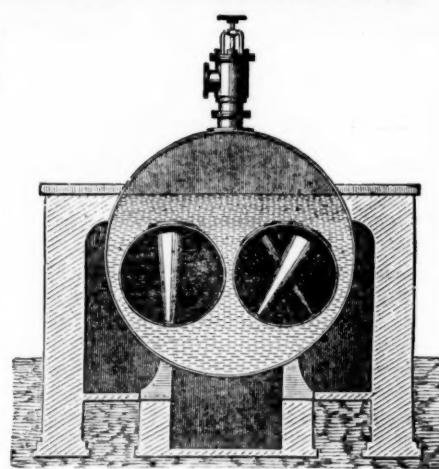
MANUFACTURERS OF THE WELL-KNOWN

**"GALLOWAY BOILER,"**

AS PER SKETCH ANNEXED.

UPWARDS OF TWO THOUSAND OF WHICH ARE NOW AT WORK.

BOILERS OF ANY DIMENSIONS, UPON THIS OR ANY OTHER PLAN, CAN BE DELIVERED WITHIN A FEW DAYS FROM RECEIPT OF ORDER.



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General Millwrighting.—Hydraulic Machinery.—Polishing, Grinding, and other Machines for Plate Glass.

LEAD ROLLING MILLS AND PIPE PRESSES. CAST AND WROUGHT-IRON GIRDER BRIDGES.

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Shearing and Punching Machines Bending Rolls, and every description of Boilermakers' Tools, &amp;c., &amp;c.



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Inspections and valuations attended to.

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Have the BEST and LATEST INFORMATION on all the LEAD MINES of WALES and the NORTH OF ENGLAND, and on all AMERICAN MINES, and are in a position to transact business in most of them at closest market prices.  
Messrs. LISCOMBE and Co. issue monthly the "Liverpool Mining Circular," containing special information on all the leading Welsh Mines, which can be had on application.

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MINING AGENT, ENGINEER, AND SURVEYOR.  
The great success which is attending the opening and working of the Mines in the counties of Cardigan and Montgomery, and the many properties placed at the disposal of Capt. ABRAHAM FRANCIS, induces him to offer his services, either to ADVISE, INSPECT, REPORT, or SURVEY, for Mining Companies or private shareholders.  
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The following SHARES should be BOUGHT AT ONCE:—Carn Camborne, North Crofty, Great Wheal Vor, Rosewall Hill, Wheal Margaret, South Condurrow, East Seton, Cook's Kitchen, and Thieroff.  
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**MR. WILLIAM NETTLE, of CORNWALL,** having been practically engaged in Gold Mining in California for a period of Fifteen Years, is now PREPARED to GIVE the MOST RELIABLE INFORMATION and SOUNDTEST ADVICE to ENGLISH CAPITALISTS, to whom valuable, practical information is desired.

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Recently noticed in the MINING JOURNAL, and for which the FIRST-CLASS MEDAL OF THE ROYAL POLYTECHNIC SOCIETY has been AWARDED.  
ASHCROFT DETECTOR AND ALARM COMPANY,  
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**CHEAP SUBSTANTIAL HOUSES FOR MINERS, &c.**  
**PLANS AND ESTIMATES OF CHEAP AND SUBSTANTIAL** HOUSES FOR MINERS AND WORKMEN, &c., built with 9 inch hollow walls of ordinary bricks, from designs by Mr. JNO. POVEY HARPER, M.E., Derby.  
Set of five lithograph plans, fully dimensioned and sections, coloured, £1 12s. 6d.  
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Shares.	Company.	Paid.	Price.
100	John Abbot and Co. [L.]	75 0 0	22 20 dis.
80	Blacknave Iron and Steel Co. [L.]	7 10 0	30 32 pm.
100	Bolckow, Vaughan, and Co. [L.]	30 0 0	5 4 dis.
100	Brown, John, and Co. [L.]	70 0 0	5 4 dis.
100	Consett Iron Co. [L.]	7 10 0	4 4 1/2 dis.
100	Cammell and Co. [L.]	80 0 0	17 15 dis.
22	Ebbw Vale Co. [L.]	27 10 0	9 1/2 dis.
20	General Mining Association [L.]	20 0 0	4 7 1/2 dis.
10	Hopkins, Gilkes, and Co. [L.]	10 0 0	1 1/2 dis.
10	Ironmasters' Company [L.]	10 0 0	20 25 pm.
10	Midland Iron Co. [L.]	10 0 0	8 7 1/2 dis.
2 1/2	Mercy Steel and Iron Co. [L.]	11 10 0	2 1/2 dis.
4	Myndy Iron Ore Co. [L.]	3 10 0	2 1/2 dis.
1	Nerbury Iron and Coal Co. [L.]	0 7 0	par.
25	Palmer's Shipbuilding and Iron Co. [L.]	25 0 0	1 1/2 dis.
100	Parkgate Iron Co. [L.]	25 0 0	1 1/2 dis.
20	Patent Shaft and Axletree Co. [L.]	65 0 0	5 dis. par.
20	Rhymney Iron Co. [L.]	20 0 0	5 pm.
15	Ditto New	15 0 0	21 19 dis.
60	Shotts Iron Co.	20 0 0	21 19 dis.
100	Sheepferry Iron and Coal Co. [L.]	55 0 0	17 16 dis.
200	Staveley Iron and Coal Co.	60 0 0	40 42 1/2 pm.
100	Ditto	10 0 0	8 9 pm.
100	Thames Iron Company	100 0 0	—
7 1/2	Titanic Iron and Steel	10 0 0	—
100	Vancouver Coal [L.]	0 0 0	par. 1 pm.
10	Van Iron Ore [L.]	10 0 0	—
100	Wigan Coal and Iron Co.	100 0 0	10 8 dis.
75	Ditto ditto	75 0 0	10 8 dis.

## THE MINING SHARE LIST

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, c. Cheshire	10 0 0	—	—	10 6 8	0 5 0	Jan. 1869
6000	Boscawell, t. c. St. Just	1 0 0	—	—	0 2 0	0 2 0	Apr. 1870
300	Botallack, t. c. St. Just	91 5 0	225	225	585 5 0	0 5 0	Nov. 1870
30000	Bronfloyd, t. Cardigan	2 10 0	—	—	2 11 0	0 1 0	Jan. 1871
6000	Brookwood, c. Buckfastleigh	1 10 0	—	—	0 15 0	0 2 0	Nov. 1870
6000	Bwlch Consols, s. t. Cardigan	4 0 0	2	1 1/2	0 9 0	0 2 0	May 1870
6000	Cashwell, t. Cumberland	2 10 0	—	—	0 14 0	0 2 0	Dec. 1870
916	Carroll, s. t. Newlyn	16 5 7	3 1/2	2 1/2	16 15 0	0 10 0	Aug. 1869
2450	Cook's Kitchen, c. Illogan	19 14 9	20	17 1/2	5 5 6	0 12 6	Jan. 1871
867	Cwm Erfin, t. Cardiganshire	7 10 0	—	—	32 8 0	0 5 0	Oct. 1870
128	Cwmystwith, t. Cardiganshire	60 0 0	—	—	387 10 0	0 2 0	July 1869
280	Derwent Mines, s. t. Durham	300 0 0	—	—	177 0 0	0 2 10	July 1868
450	Devon Gl. Consols, c. Tavistock	1 0 0	110	95 107	1149 0 0	0 4 0	Nov. 1870
1024	Ding Dong, t. Gwilt	49 14 6	17	18 17	0 10 0	0 15 0	Aug. 1870
1437	Dolcoath, c. t. Camborne	32 4 6	130	125 130	251 2 6	0 3 0	Dec. 1870
12800	Drake Walls, t. Calstock	2 10 0	1 1/2	1 1/2	1 3 3	0 1 0	July 1870
6144	East Cardon, c. St. Cleer	2 14 6	5	5 6	14 11 6	0 2 0	July 1867
300	East Darren, t. Cardiganshire	32 0 0	—	—	188 10 0	0 2 0	Sept. 1870
1400	East Pool, t. c. Pool, Illogan	0 9 9	11	10 1/2	11 1 3	0 4 0	Jan. 1871
1900	East Wheal Lovell, t. Wendron	3 9 0	32	32 33	14 16 0	0 2 0	Nov. 1870
6000	Foxdale, t. Isle of Man	25 0 0	—	—	77 5 0	0 2 0	Dec. 1870
2000	Frank Mills, t. Christow	3 18 6	1 1/2	1 1/2	4 8 0	0 10 0	Aug. 1870
3950	Gawton, c. Tavistock	3 10 0	—	—	0 3 0	0 3 0	Jan. 1869
15000	Great Laxey, t. Isle of Man	4 0 0	17	17 18	13 9 0	0 8 0	Dec. 1870
3000	Great Northern Manganese	5 0 0	—	—	—	5 p.c.	Feb. 1869
2908	Great Wheal Vor, t. c. Helston	40 0 0	5 1/2	6 1/2	15 12 0	0 3 6	Nov. 1870
10240	Gunnislake (Clitters), t. c. c.	4 19 0	—	—	0 2 0	0 1 0	Nov. 1870
1024	Holmbush, t. near Liskeard	8 10 0	43	41 44	84 0 0	0 10 0	Oct. 1870
10000	Holmbush and Kelly Bray, c.	1 0 0	—	—	0 3 0	0 1 0	Nov. 1869
10000	Killaloe, t. Tipperary	1 0 0	—	—	0 2 0	0 7 0	Jan. 1870
165	Levant, c. t. St. Just	10 8 1	—	—	1101 0 0	0 2 0	Aug. 1869
4000	Lisburne, t. Cardiganshire	18 15 0	—	—	529 0 0	0 2 0	Jan. 1870
3000	Mace-y-Sain, t. Flint	20 0 0	—	—	4 0 0	0 5 0	Oct. 1868
9000	Marke Valley, c. Cardon	4 10 6	7 1/2	6 1/2	6 14 0	0 4 0	Jan. 1871
1800	Minera Mining Co., t. Wrexham	25 0 0	—	—	282 3 4	0 4 0	Nov. 1870
30000	Mining Co. of Ireland, c. t. c.	7 0 0	7	7 7 1/2	0 4 6 1/2	0 2 1	July 1870
6400	New Penbrook, t. c. Par Station	5 0 0	—	—	0 5 0	0 2 6	Nov. 1870
2000	North Wheal Crofty, c. Illogan	10 12 0	1 1/2	1 1/2	1 15 0	0 10 0	Aug. 1870
8610	North Wheal Crofty, c. Illogan	3 11 3	2 1/2	2 1/2	0 4 0	0 1 6	Oct. 1870
256	Pendall's United, t. c. Camb.	86 0 0	60	55 60	15 0 0	0 5 0	Nov. 1870
5000	Penhall, t. St. Agnes	3 0 0	5 1/2	5 6	113 6 0	0 4 0	Oct. 1870
500	Phoenix, t. c. Llaninhorne	50 0 0	—	—	456 10 0	0 7 0	May 1870
2000	Pollice, c. t. Gwennap	10 0 0	—	—	1 10 0	0 10 0	Oct. 1870
12800	Prince of Wales, c. Calstock	0 12 6	1 1/2	1 1/2	0 10 6	0 1 0	Nov. 1869
1120	Provident, c. t. Uny Lelant	10 6 7	37	37 38	100 12 6	0 1 0	Dec. 1870
15000	Queen, s. t. Calstock	0 10 0	—	—	0 2 0	0 1 0	Dec. 1870
2502	Rosewall Hill & Ranges, c. t. c.	4 0 0	1 1/2	1 1/2	0 13 0	0 6 0	Dec. 1870
812	South Cardon, c. St. Cleer	1 6 0	250	230 250	655 10 0	0 4 0	Nov. 1870
6000	South Darren, t. Cardigan	3 6 6	—	—	1 1 6	0 1 6	Nov. 1870
937	South Wh. Crofty, c. Illogan	24 10 10	6	6 7	3 0 0	0 10 0	June 1870
496	St. W. Frances, c. Illog.	18 19 9	29	29 30	374 13 6	0 1 0	Mar. 1868
242	Spear Moor, t. St. Just	36 17 9	18	14 16	14 15 0	0 1 0	Oct. 1870
940	St. Ives Consols, t. St. Ives	10 15 0	—	—	0 10 0	0 10 0	May 1869
8771	St. Just Amalgamated, t. c.	3 10 0	—	—	0 5 0	0 2 6	Nov. 1870
12000	Tankerville, t. Salop	6 0 0	13	13 13 1/2	0 10 0	0 6 0	Oct. 1870
6000	Tinctor, c. t. Pool, Illogan	6 0 0	—	—	27 8 0	0 10 0	Nov. 1870
2000	Trumpet Cons., t. Helston	11 10 0	22	20 22	12 7 0	0 15 0	Dec. 1870
12000	Van, t. Llanidloes	4 5 0	57 1/2	54 56	3 10 0	0 15 0	Dec. 1870
3000	W. Chiverton, t. Perranzabuloe	10 0 0	50	47 49	47 7 6	0 2 0	Nov. 1870
512	West Wheal Frances, t. Illogan	102 15 0	30	30 32	5 10 0	0 1 0	Jan. 1871
400	W. Wheal Seton, c. Camborne	47 0 0	115	105 115	669 0 0	0 2 10	Dec. 1870
812	Wheal Bassett, c. Illogan	5 2 6	70	54 57	632 10 0	0 1 0	June 1868
812	Wheal Jane, s. t. Kea	10 15 0	56	54 57	32 10 0	0 1 0	Nov. 1870
1000	Wheal Killy, t. c. St. Agnes	3 0 0	9 1/2	9 10	8 13 0	0 7 0	Nov. 1870
1024	Wheal Killy, t. Uny Lelant	3 10 6	10	9 10	12 7 6	—	—
896	Wheal Margaret, t. Uny Lelant	18 17 6	8	8 8	78 15 0	0 10 0	Nov. 1870
1024	Wheal Mary Ann, t. Menheniot	8 0 0	13 1/2	12 14	71 17 6	0 10 0	Dec. 1870
1000	Wh. Mary Hutchins, t. Plymouth	2 12 6	—	—	0 10 0	0 5 0	Aug. 1869
80	Wheal Owles, t. St. Just	70 0 0	—	—	474 13 0	0 10 0	Nov. 1870
12000	Wheal Russell, c. Tavistock	1 0 0	—	—	0 1 0	0 1 0	Dec. 1870
496	Wheal Seton, t. c. Camborne	60 0 0	27	26 28	304 15 0	0 2 0	Feb. 1869
17000	Wicklow, c. t. Wicklow	2 10 0	8 1/2	7 1/2	20 2 6	0 2 0	Sept. 1870

FOREIGN DIVIDEND MINES.									
35000	Alamitos, t. Spain	2 0 0	2 1/2	1 1/2	0 13 0	0 2 6	Oct. 1870		
130000	Almaden & Tinto Consolidated, s. t.	1 0 0	1	1 1/2	0 1 6	0 1 6	Oct. 1870		
20000	Australian, c. South Australia	7 7 6	14	14 1/2	0 1 6	0 1 6	Aug. 1868		
12000	Cape Copper Mining	7 0 0	14	14 1/2	1 1 6	0 10 0	May 1870		
30000	Central American Association	0 15 0	—	—	0 6 0	0 1 6	July 1869		
21000	Colorado Terrible, s. t. Colorado	5 0 0	4 1/2	4 1/2	0 2 6	0 2 6	Nov. 1870		
10000	Copahu Mining Co., Chile	16 10 0	3	3 3	0 4 0	0 4 0	April 1869		
76162	Don Pedro North del Rey	0 14 0	2 1/2	2 1/2	2 3 9	0 4 0	Mar. 1870		
70000	English and Australian, c. t.	2 10 0	—	—	1 19 0	0 9 0	Feb. 1869		
20000	Fortuna, t. Spain	2 0 0	2 1/2	2 1/2	2 2 10	0 2 0	Oct. 1870		
10000	Gonnesa, t. Sardinia	5 0 0	—	—	0 10 0	0 10 0	Aug. 1868		
65000	Kapunda Mining Co., Austr.	1 0 0	3 1/2	3 1/2	0 1 0	0 6 0	Nov. 1868		
15000	Llaneros, t. Spain	1 0 0	3 1/2	3 1/2	12 13 0	0 5 0	Oct. 1870		
15000	Panuco, c. Chile	4 0 0	2 1/2	2 1/2	10 10 0	0 10 0	Nov. 1870		
10000	Pontebland, s. t. France	20 0 0	17	16 17	7 1 8	0 15 6	Nov. 1869		
100000	Port Phillip, c. Mines	1 0 0	1	1 1 1/2	1 6 0	0 1 6	Jan. 1870		
12000	Scottish Australian Min. Co., t.	1 0 0	—	—	6 6 0	0 6 0	Apr. 1870		
11000	St. John del Rey, Brazil	15 0 0	25	23 25	81 10 0	4 5 0	Dec. 1867		
15000	Sweetland Creek, g. California	4 0 0	4 1/2	3 1/2	0 8 0	0 4 0	Nov. 1870		
50000	Victoria (London) [25000 £1 pd.]	25000 12s. 6d. pd.	—	—	0 9 7 1/2	0 7 1/2	July 1868		